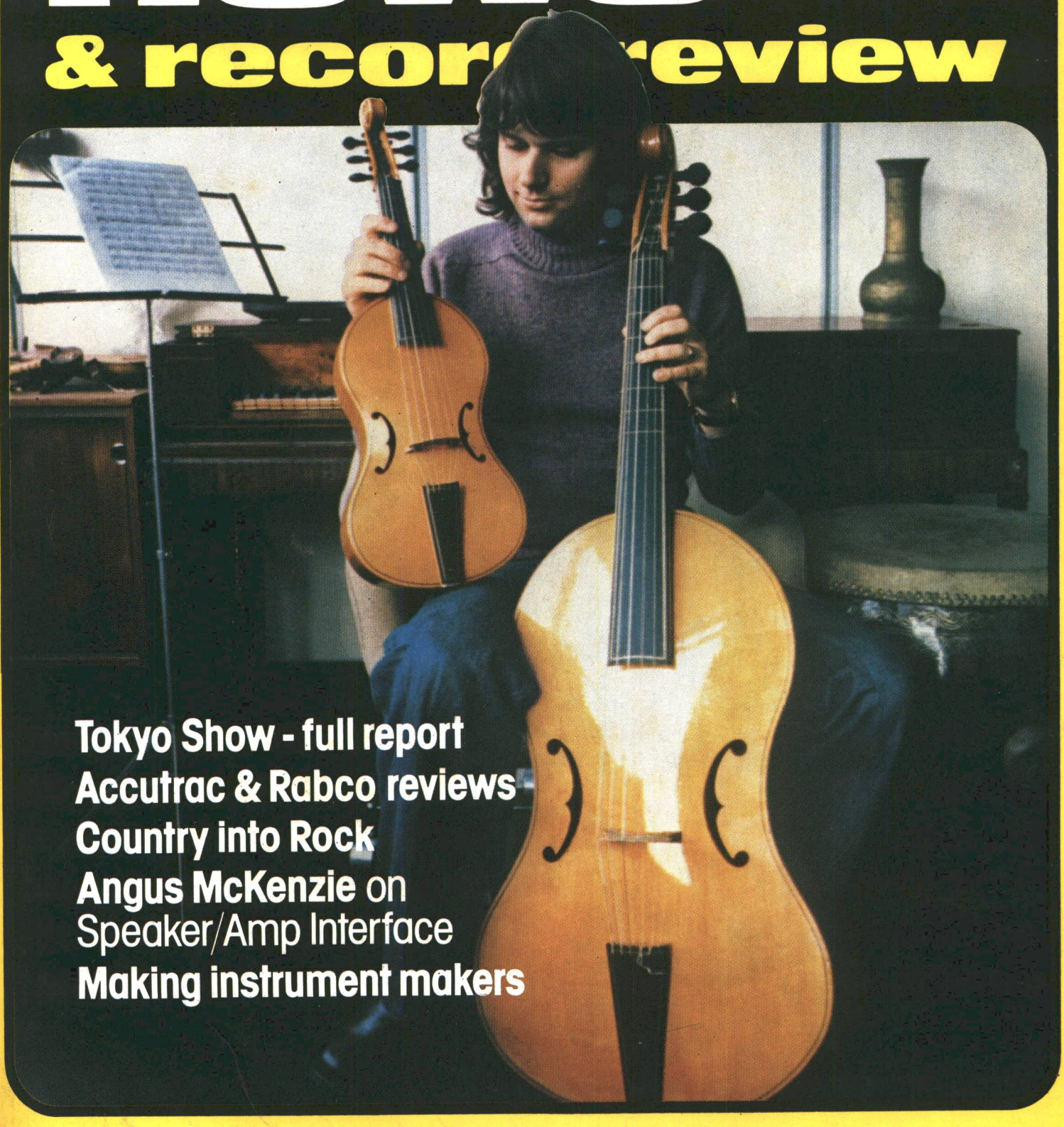
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hi-fi news & record review



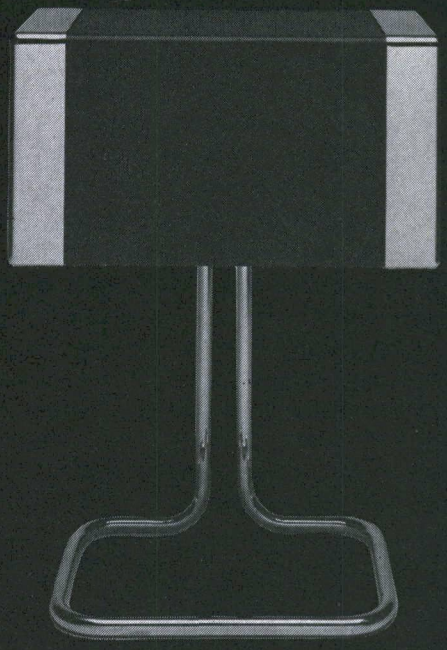
Tokyo Show - full report
Accutrac & Rabco reviews
Country into Rock
Angus McKenzie on Speaker/Amp Interface
Making instrument makers

9 out of 10 people who read this ad shouldn't buy this speaker

If you own a receiver or amplifier of less than 40 watts per channel the Gale 401 loudspeaker is not for you!

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Then consider the Gale 401 loudspeaker.



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Tokyo exhibition hall housing part of the audio show described by Paul Messenger on page 55.

Britain's largest circulation journal devoted equally to records and hi-fi, with an audited average net sale of 54,262 copies per issue at the last count (January–December 1975).

Technical articles of full page length or over appearing in *Hi-Fi News & Record Review* are detailed in the British Technology Index.

ABC

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COVER PICTURE

Intrigued by adverts in the musical press, our News Editor went with a photographer to take a look at courses in Musical Instrument Technology at the London College of Furniture. Impressed with two viols, amongst the first to be made there, he decided to please his dear old Mum and pose with them for our cover picture, thus satisfying a life-long ambition to be in pictures.

Classical Record Index

101 **The Art of the Netherlands** (*Des Pres; Isaac; Brumel; etc*)

C. P. E. BACH
101 Sonatas, rondos and fantasias

J. S. BACH
101 Cantatas 10, 24 & 135
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102 Cantatas 34, 68 & 175
102 3 part inventions, etc
102 **Ballads, Songs and Snatches** (19 songs)

BEETHOVEN
100 Symphonies 1–9
102 Marches and dances
102 Violin sonatas 3 & 8
102 Piano sonatas 8, 14 & 23
102 Piano sonatas 18 & 23

BRAHMS
102 Clarinet trio
103 Violin sonata 1 / Trio, Op. 78
103 **Busoni (and pupils)**—Complete disc recordings

BYRD
103 My Ladye Nevells Booke
103 **John Carreras—Recital** (*Bellini; Donizetti; Verdi; etc*)
103 **Gwen Catley—Recital** (*Bizet; Delibes; Gounod; etc*)
104 **Cherkassky Recital** (*Albeniz; Chopin; Schumann; etc*)

CHOPIN
104 Complete preludes (2)
104 Piano works
104 Complete Nocturnes
104 **The Concert of the Century** (*Beethoven; Bach; Schumann; etc*)

COUPERIN
104 Harpsichord pieces

DELIUS
100 Music of Delius, Vol. 1
105 'Fennimore and Gerda'
105 **La Divina—The Art of Callas** (*Bellini; Cilea; Delibes; etc*)

DUKAS
105 La Péri

DVORAK
105 New World Symphony (2)
107 **Elizabethan and Tudor Madrigals** (*Morley; Vautor; Dowland; etc*)

FAURE
107 Masques et Bergamasques
107 Songs

FOSTER
107 Songs, Vol. 2

GLAZUNOV
107 Symphony 4 / Poeme lyrique / etc
107 **Guitar Music of Spain** (*Torroba; Sanz; Sor; etc*)

HAHN
107 Songs

HANDEL
109 'Belshazzar'

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109 Symphonies 43 & 59
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KORNGOLD
109 Songs and Arias

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109 Piano concertos 1 & 2

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MATHIAS
111 'This World's Joie'

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102 Marches and dances
111 Piano concertos 19 & 23
111 Piano concertos 20 & 23
111 Piano music
111 'Der Schauspieldirektor' / 'Lo sposo deluso'
113 **Oboe Music** (*Bellini; Molique; Moscheles; etc*)

ORFF
113 Carmina Burana
113 **Overtures** (*Beethoven; Berlioz; Brahms; etc*)

PALESTRINA
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POULENC
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107 Carnival of the animals
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115 Lieder

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TCHAIKOVSKY
117 The Nutcracker
117 Violin concerto / etc

VERDI
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118 Operatic recital

WAGNER
99 'Die Meistersinger'

WEBER
103 Grand duo concertant
118 Songs
118 **The World of Joseph Cooper,** Vol. 2

119 **DEJA VU**—re-issues

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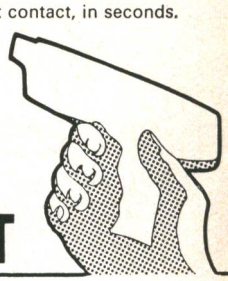
Record care

One way of removing bothersome dust from hi-fi records is to clamp the disc firmly in a vice and run over the surface with a power sander. An annoying side effect of this method is that the record grooves have a tendency to disappear and the hole in the middle of the record may well be enlarged to a diameter greater than the disc.

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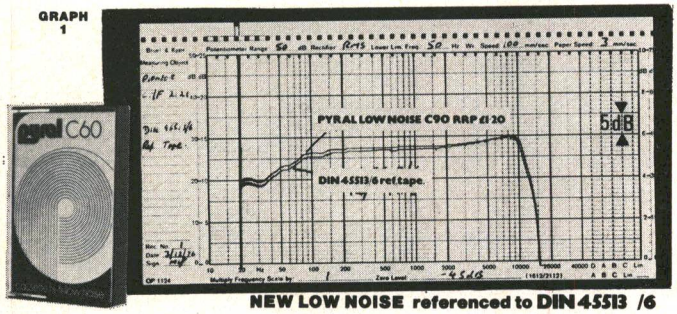


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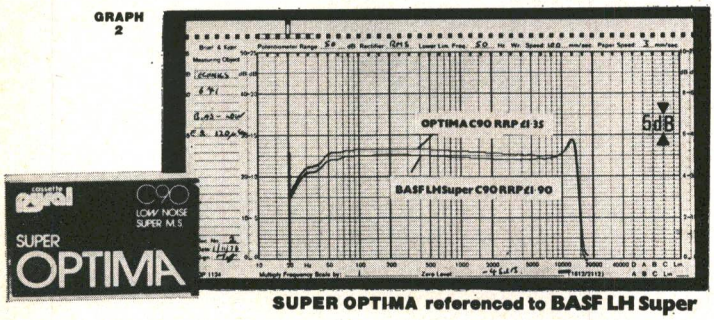


GRAPH 1



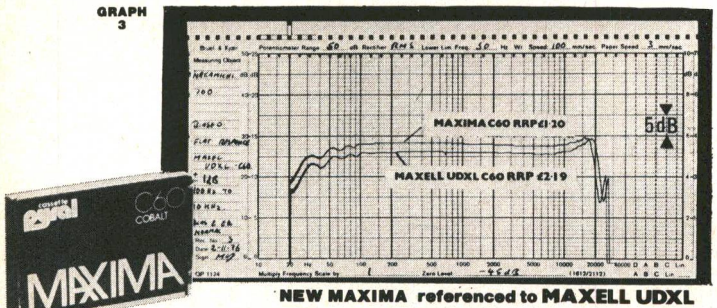
NEW LOW NOISE referenced to DIN 45513 /6

GRAPH 2



SUPER OPTIMA referenced to BASF LH Super

GRAPH 3



NEW MAXIMA referenced to MAXELL UDXL

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All R.R.P. are at time of going to publication and exclude VAT.

NEW CASSETTES FROM PYRAL

TEST PROCEDURE

Graph 1 was plotted using a Pioneer 2121 cassette deck, Graph 2 using Technics 67·1, Graph 3 Nackamichi 700.

The input level was −20dB ref. 230nW/B level. Test equipment was based on B+k 2010 Analyser and B+k 2307 level recorder. All bias settings were based on standard ferric bias switch or deck manufacturers recommended procedure.

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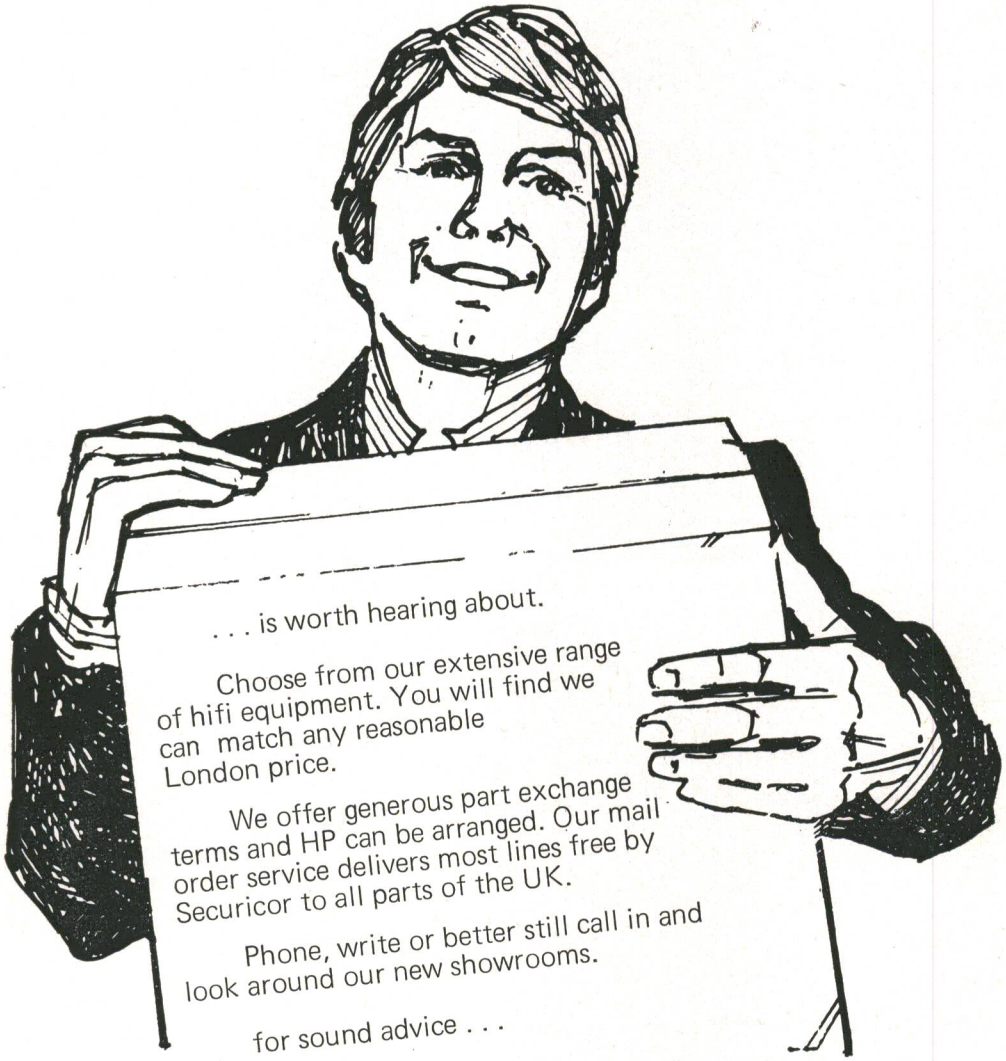
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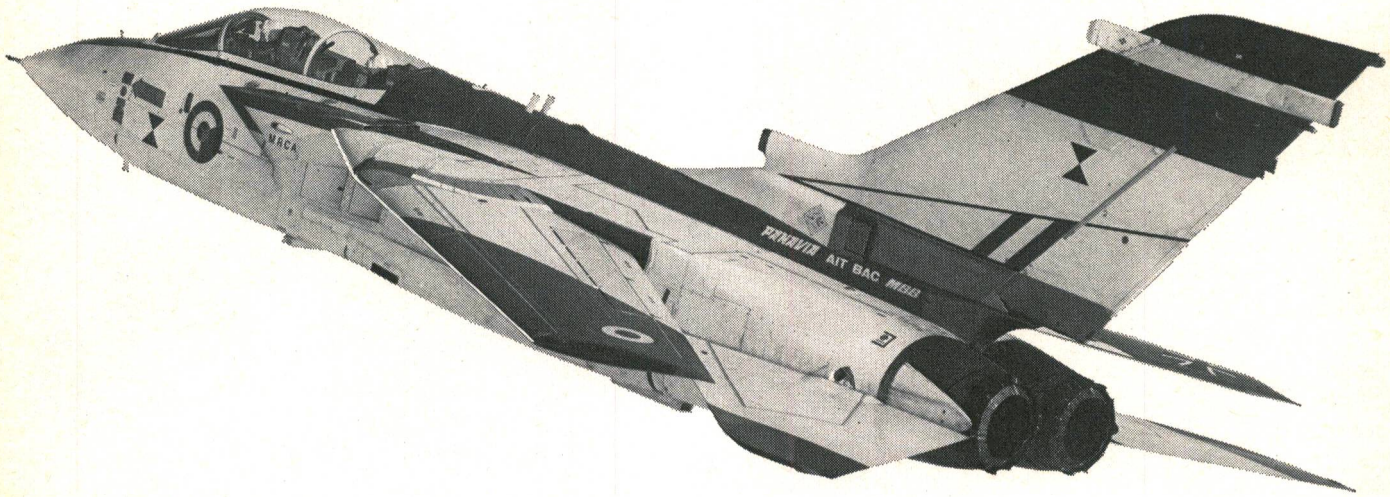
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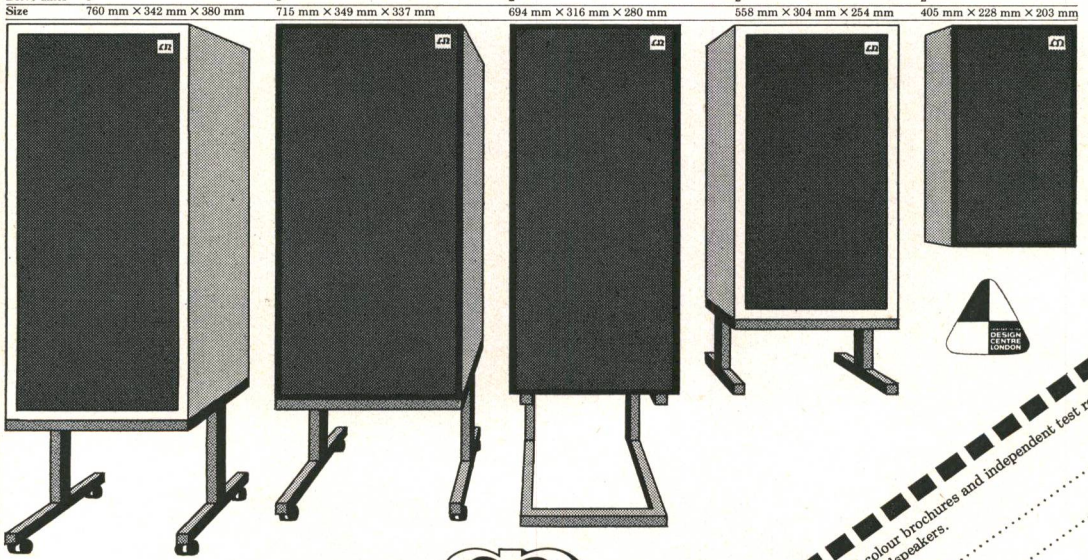
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	120	0·98	3·40		60	0·67	6·40		90	0·75	7·25
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	90	1·03	9·90		120	1·20	11·50		180	2·42	23·00
	120	1·36	13·00	Mem'x CrO_2	60	0·90	8·50	Basf	5″	2·22	21·40
Basf CrO_2								LH	5¾″	2·72	26·20
	60	1·04	10·00	TDK	60	0·93	9·00	LP	7″	3·99	38·00
	90	1·28	12·40	Audua	90	1·33	12·78	Basf	5″	2·72	26·20
	120	1·69	16·25		90	1·25	12·00	LH	5¾″	3·70	35·60
Basf Fe-Cr				S.D.	45	0·62	6·00	DP	7″	4·99	47·64
	60	1·29	12·43		60	0·68	6·50	Basf	5″	3·92	37·76
	90	1·69	16·25		90	0·93	9·00	LH	5¾″	4·71	45·40
Budget type					120	1·33	12·78	TP	7″	6·55	59·00
	60	0·40	3·50	Super Avolyn				Basf Sup.	5″	2·40	23·00
	90	0·50	4·50		60	0·99	9·60	LH	5¾″	2·87	27·60
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H.C.L.	60	0·62	6·00	Sony Fe-Cr				Basf Sup	5″	3·10	29·90
	90	0·82	8·00		90	1·86	17·88	LH	5¾″	4·52	43·00
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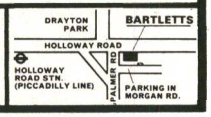
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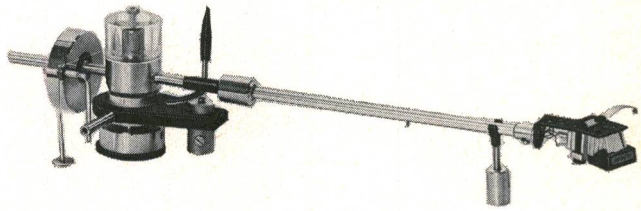


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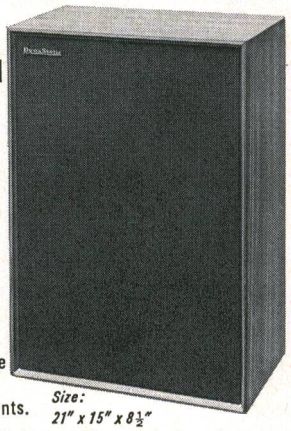
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Beomaster 4000 & 6000

AMPLIFIERS & TUNERS

Sony TA70 & ST70
Sony TA88 & ST88
Sony TA1630 & ST2950F
Sony TA2650 & ST3950
Sony TA3140F & ST5130
Sony TA3650 & ST5950
Sony TA5650 & ST5055L
Sony TA8650 & ST5066
Technics SU7200 & ST7200
Technics SU7600 & ST7600
Technics SU3500 & ST3500
Technics SU8600 & ST9600
Technics SU9600 & SE9600
Pioneer SA5300 & 6300
Pioneer SA7300 & 7500
Pioneer SA8500 & 9500 etc.
Lecson

TURNTABLES

Sony PS1350 & 1700
Sony PS3300 & 4300
Sony PS6750
Technics SL20 & 23
Technics SL1500 & 1300
Technics SL1400 & 120
Technics SL110
Technics 10 Mk II
Strathearn
Beogram 1100 & 3400
Beogram 4002 & 6000

SPEAKERS

Celestion
Ditton 11, 15, 33
Ditton 44, 25, 66
UL6, 8 & 10

Acoustic Research
AR10x, 11, 12, 14
AR16, 7x, 4xa, etc.

Tannoy
Eaton, Devon, Cheviot, Berkeley, Arden

Technics
SB30, 40 & 102
SB202, 302, 402
SB501, 5000 etc.

Sony
SS70 & 5088
SS3050 & 5050
SS8150 & 1030
SS1050 & 2030
SS2050 & 2070

Wharfedale
Chevin, Denton, Linton, Glendale, Dovedale, Airdale, etc.

Also **Mordaunt-Short JR149, Celef, B&W** etc.

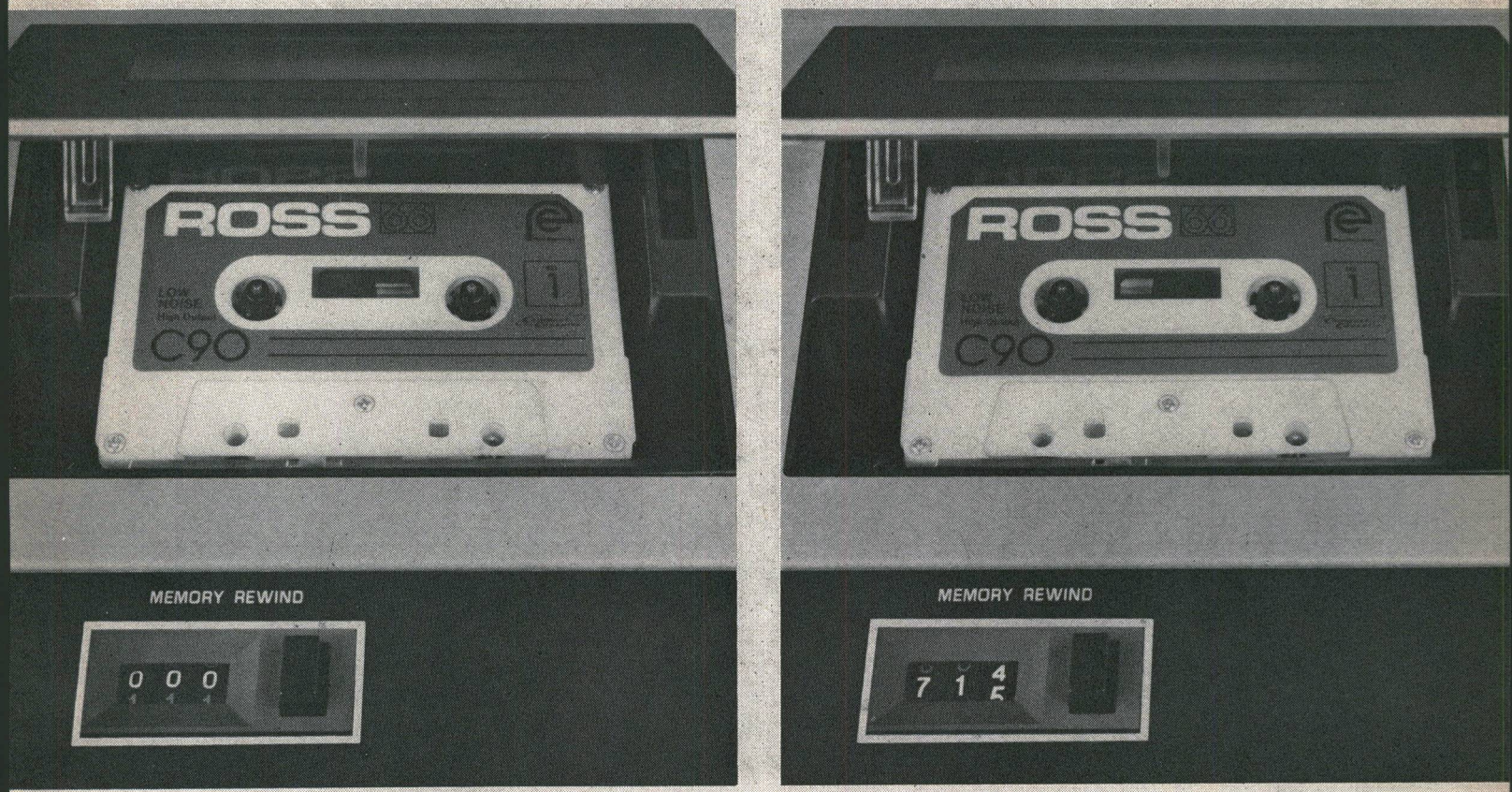
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AU4900	£119·50
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2060	£141·95
3020	£94·95
3030	£124·95
3050	£172·95
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Marantz Imp. 4G	£87·25
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Imp. 6G	£168·00
Imp. 7G	£207·00
Wharfedale Chevin XP	£28·50
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Linton 3XP	£59·95
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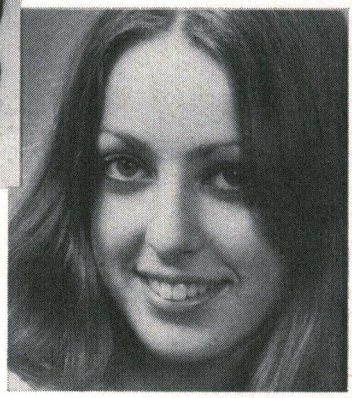
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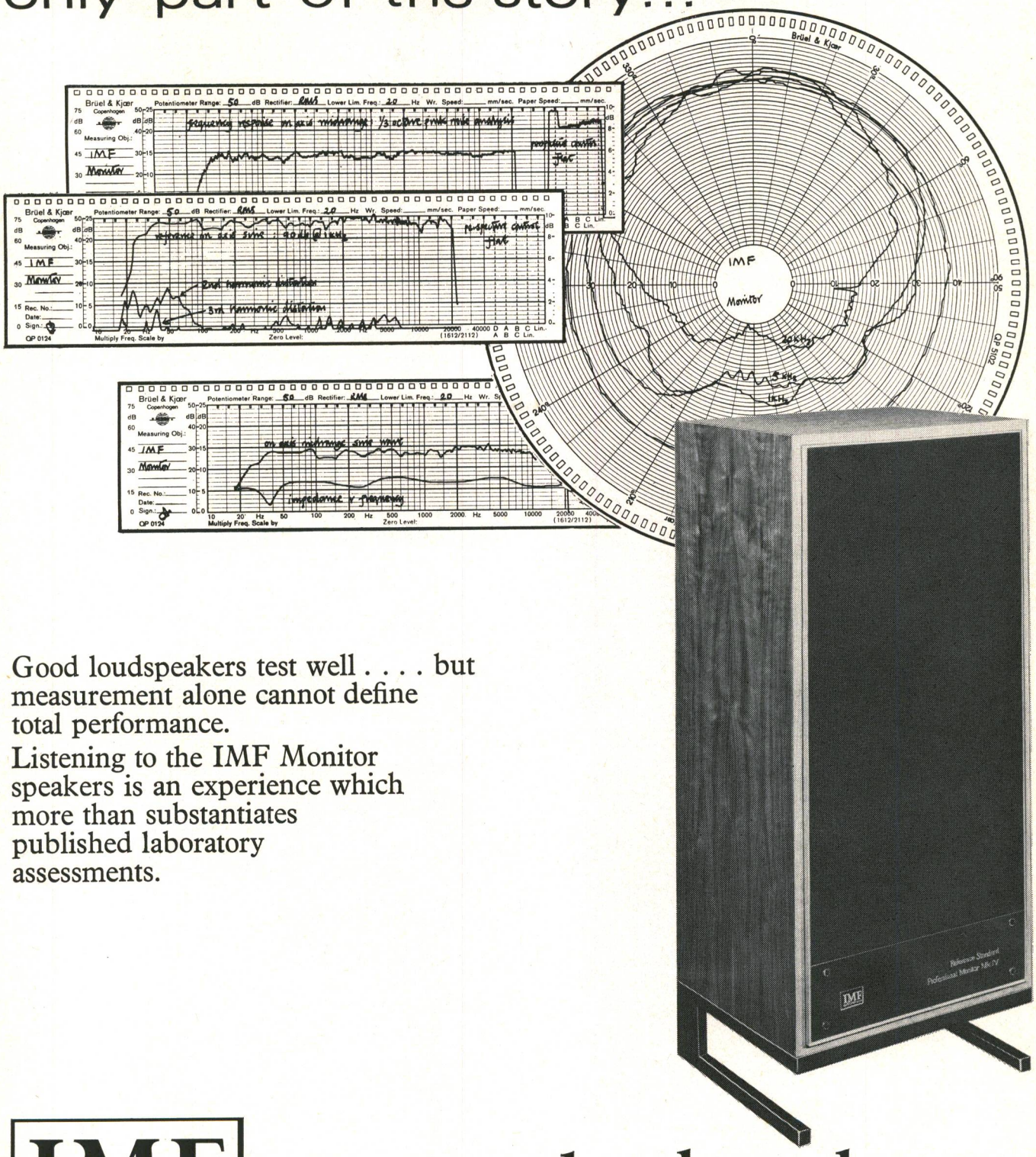
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West One Diary

A MONTHLY COMMENT FROM KJ WIGMORE STREET

ELCASET EL7



At the time of going to press (Nov. 23rd) we had received the new Sony EL7 and EL5 Elcaset recorders and their performance caused quite a stir among our staff. After a period of concentrated listening and comparison with other tape mediums there is no doubt in our minds that the system is most impressive and completely viable.

The price for the software is higher than for the compact cassette but necessarily so as tape for 'Elcaset' is twice the width and the speed is double, which effectively means four times the amount of tape used for any given programme.

Comparisons with compact cassettes are fairly meaningless in our opinion anyway as the EL7 can happily be compared to top quality open reel machines. To prove our point we did some simultaneous recording with the EL7 and a very famous 10½" 2 track tape deck utilising a DBX 122 unit (yes, the background noise level on ELcaset is slightly higher than on open reel machines correctly set for the tape and running at 15 i.p.s.!) and played the resultant tapes back to staff members and some customers who were in the shop at the time. The tapes were auditioned through a system costing over £2000 and no one could tell the difference.

For any enthusiast with a top grade Hi-Fi system looking for a top quality recorder with cassette convenience we would strongly recommend the EL7 which is audibly better than the best cassette decks we have encountered and is cheaper to run than an open reel two track machine at 15 i.p.s. VIVA EL CASET !

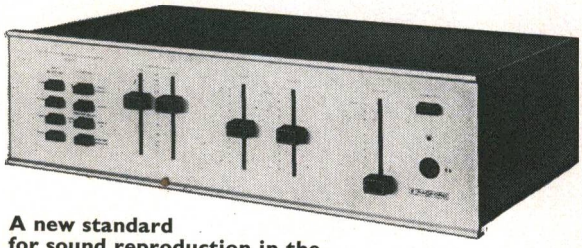
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Rated power output: 50 watts av. continuous per channel into any impedance from 4 to 8 ohms, both channels driven.

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Distortion, preamplifier: Virtually zero (cannot be identified or measured as it is below inherent circuit noise).

Distortion, power amplifier: Typically 0·006% at 25 watts, less than 0·02% at rated output. (Typically 0·01% at 1 kHz.)

Hum and noise: Disc, —83 dBV measured flat with noise band width 23 kHz (ref. 5 mV); —88 dBV "A" weighted (ref. 5 mV). Line—85 dBV measured flat (ref. 100v). —88 dBV "A" weighted (ref. 100v).

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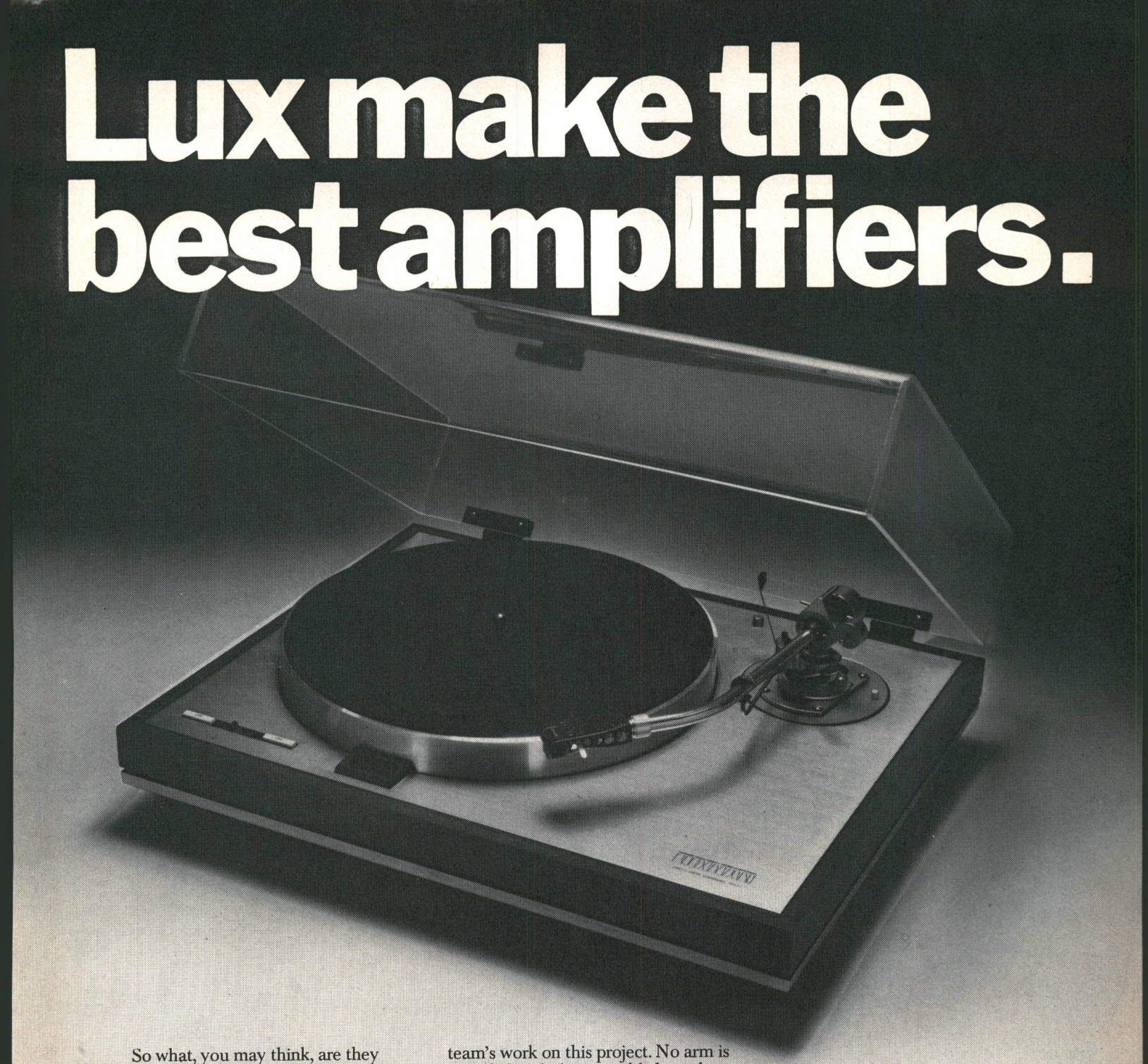
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- Mail orders to: REW House (dept HFN), 10–12 High Street Colliers Wood, London SW19. Tel: 01-540 9684/5/6.

Lux make the best amplifiers.



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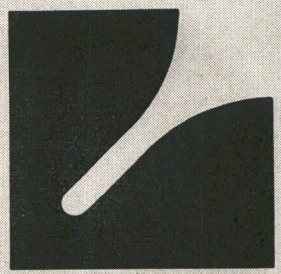
If you really want to know what Lux are doing with a turntable here are a few facts:

Drive is obtained directly from an electronically controlled brushless DC Servo Motor. This gives extremely high torque and Wow & Flutter of no more than 0.03% WRMS. S/N ratio is around 70dB and the rigid construction and unique motor suspension contribute to the prevention of acoustic feedback.

The basic design philosophy is simplicity and lack of gimmicks as can be seen from the uncluttered slim appearance, but a number of unusual features give credit to the LUX design team's work on this project. No arm is included with the turntable but a bayonet fitting arm mounting base is supplied cut out for the SME arm acknowledged by many to be the best available. For those whose choice of arm lies elsewhere spare uncut arm bases are available. Arm interchange is thus possible by a mere twist of the base mounting.

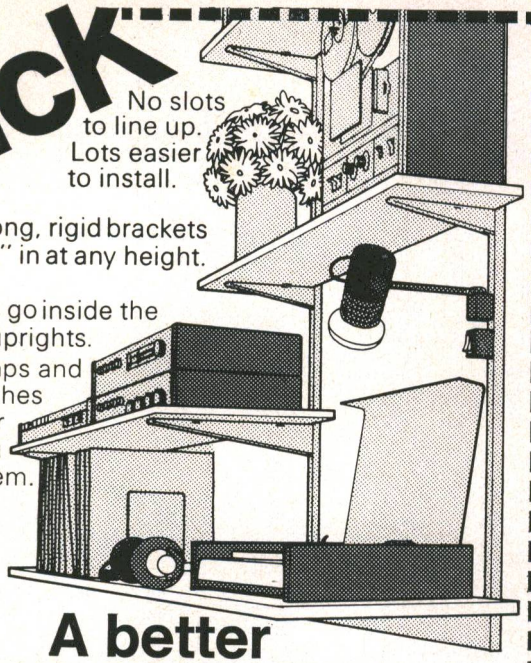
Speeds are variable ± 4% and a unique 'Black Light' stroboscope gives immediate speed readings for 33⅓ and 45 rpm. Levelling is obtained by means of adjustable feet incorporating rubber damped springs suspended in silicon grease for insulation from vibration.

Price? It costs a little more than most other turntables–but we don't think it's expensive–after all Lux do make the best amplifiers...



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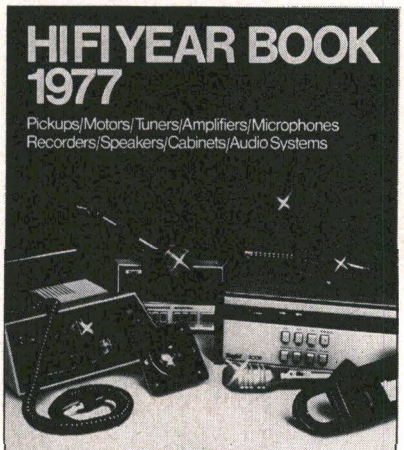
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Sugden BD1 Chassis	£16·00
Sugden BD1 Chassis Kit	£13·00
Sugden BD2 & SAU2 Chassis	£31·00
Sugden SAU2	£13·50
Thorens TD125 Mk 2	£94·00
Transcriptors Fluid Arm	£25·00

● TURNTABLE PACKAGES (P/P on application)

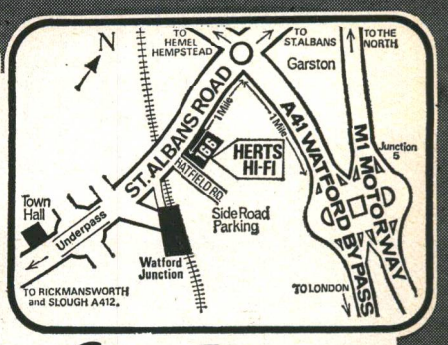
ADC Accutrac 4000 with LMA1	£250·00
Akai AP001 ex. Cart. (Sp. off.)	£66·00
Akai AP003 and AT11 (Sp. off.)	£94·50
Akai AP006	£171·00
BSR BDS80 Module ex. Cart.	£29·00
BSR BDS95 Module ex. cart.	£33·00
BSR MP60 Module ex Cartridge	£25·00
Fons CQ30	*P.O.A.*
Garrard Zero 100SB Module and C.	£62·00
Garrard 125SB Module and M75-6	£47·50
Garrard 86SB Mk 2 Module and M75-6SM (Sp. off.)	£58·00
Garrard SP25/4 Module and M75-6S new model	£37·00
Garrard 125SB Module and M75-6S new model	£47·50
Garrard 86SB Mk 2 Module and M75-6S new model	£65·00
Garrard DD75 Module and M75EDT2	£98·50
Garrard GT55 Module and M75EDT2	£99·50
Goldring GL75P and cover	£61·50
Goldring G103PC	£41·00
Goldring L80	£59·50
Goldring L82	£68·00
Goldring L84	£81·00
Goldring L90	£126·00
Hitachi PS10 (Sp. off.)	£61·00
Hitachi PS38	£86·00
Japan Phono T601 P & C and 999REX (Sp. off.)	£41·40
JVC JLA1	£60·00
JVC JLA15	*P.O.A.*
JVC JLA45	*P.O.A.*
Leak 3001	*P.O.A.*
Linn Sondek LP12 and 3009 Teak	*P.O.A.*
Linn Sondek LP12 Teak excl. Arm	*P.O.A.*
Philips GA222	*P.O.A.*
Philips GA312	£86·50
Pioneer PL530	£180·00
Pioneer PL550	£195·00
Pioneer PL510A	£122·50
Pioneer PL112D	£61·00
Pioneer PL115D	£68·50
Pioneer PL117D	£102·00
Pioneer PL15R	£59·50
Pioneer PL55X Direct Drive	£130·00
Rank Domus BD2000 (Sp. off.)	£38·00
Rotel RP900	£57·50
Rotel RP1500 excl. Arm	£62·00
Rotel RP1500 with Arm	£70·00
Rotel RP2500	£88·00
Rotel RP3000 excl. Arm	£96·50
Rotel RP3000 with Arm	£115·00
Sansui SR222P	£64·50
Sansui SR525 Direct Drive	£130·00
Sugden BD2 P & C and SAU2	£40·50
Sugden BD2A P & C & SAU2	£46·00
Sugden BD3	£74·00

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Bush Arena TA2700 Receiver
Garrard SP25 Mk 4 Module
Shure M75-6S Cartridge
Pair Wharfedale Denton 2XP Speakers

Our Price £132·00

ROTEL RX102 Mk 2 SYSTEM

Rotel RX102 Mk 2 Receiver
BSR MP60 Module
Shure M55E Cartridge
Pair Wharfedale Denton 2XP Speakers

Our Price £163·00

ROTEL RX152 Mk 2 SYSTEM

Rotel RX152 Mk 2 Receiver
BSR MP60 Module
Shure M75-6S Cartridge
Pair Wharfedale Denton 2XP Speakers

Our Price £165·00

ROTEL RA412 SYSTEM

Rotel RA412 Amplifier
Pioneer PL112D Turntable
Shure M75ED Type 2 Cartridge
Pair Wharfedale Linton 3XP Speakers

Our Price £215·00

Or with pair KEF Chorales £231·00

Thorens TD125/2AB	£146·00
Thorens TD126C Mk 2	£220·00
Thorens TD145C Mk 2	£114·00
Thorens TD160C Mk 2	£96·00
Thorens TD126BC Mk 2	£175·00
Thorens TD160BC Mk 2	£78·00
Toshiba SR355, SR370 Direct Drive	P.O.A.
Transcriptors Electronic Reference with Arm	£153·00
Transcriptors Electronic Reference excl. Arm	£125·00
Transcriptors Hydraulic Reference exc. Arm	£105·00
Transcriptors Hydraulic Reference with Fluid Arm	£130·00
Transcriptors Prisma	P.O.A.

● CARTRIDGES (P/P 65p)

ADC XLM Mk 2 (Sp. off.)	£25·00
ADC VLM	£21·00
ADC Q30	£6·50
ADC Q32	£8·95
ADC Q36	£11·00
Decca Deram Con. L Blue	£5·00
Decca Deram Ellip. L Gold	£5·00
Empire 999REX (Sp. off.)	£4·00
Empire 2000E (Sp. off.)	£8·50
Empire 2000E/2	£13·90
Empire 2000E/3	£14·75
Empire 2000Z	£48·50
Goldring CS90	£4·50
Goldring CS91E	£5·80
Ortofon M15E Super	£39·50
Ortofon VMS20E	£24·00
Shure M44E (Sp. off.)	£7·60
Shure M55E (Sp. off.)	£8·55
Shure M75-6S (Sp. off.)	£7·60
Shure M75B Type 2 (Sp. off.)	£10·70
Shure M75ED Type 2	£15·75
Shure M75EJ Type 2	£13·30
Shure M95ED	£19·95
Shure M95EJ (Sp. off.)	£13·80
Shure M95G (Sp. off.)	£12·95
Shure V15 Type 3	£48·95

● PORTABLE RADIOS (P/P £1·00)

Hacker RP72MB Sovereign 3	£60·00
Hacker RP75MB Super Sovereign	£94·00
Hacker RP76MB Silver Knight	£53·00
Hacker RP70 Ranger	£21·00
Hacker RP78 Aviemore	£34·00
Hacker Radio Cassette RPC1	£92·00
Roberts R505	P.O.A.
Roberts R606	P.O.A.
Roberts R606MB	P.O.A.
Roberts R707	P.O.A.
Roberts Rambler	P.O.A.
Roberts RM20 Mains	P.O.A.
Roberts RM50 Mains	P.O.A.

● VIDEO TAPE AND AUDIO TAPE
FOR PHILIPS MACHINES

Scotch VC30	£11·00
Scotch VC45	£14·00
Scotch VC60	£16·70
Scotch VC60, box of 5	£82·00
Scotch VC60, box of 10	£160·00

BASF and TDK tape in stock

HACKER GAR600 SYSTEM



Our Price £215·00

Sensitive FM/MW/LW Radio with phase locked loop stereo decoder and illuminated tuning scale with sliding station markers. 14 watts RMS per channel. Full tone controls with scratch and rumble filters. Garrard 35SB belt drive turntable with magnetic cartridge. Carefully matched teak veneers give superb finish. Pair of LS550 matching bookshelf speakers.

ROTEL RX202 Mk.2 SYSTEM

Rotel RX202 Receiver
Pioneer PL112D Turntable
Shure M75ED Type 2 Cartridge
Pair Wharfedale Denton 2XP Speakers

Our Price £218·00

PIONEER SX450 SYSTEM

Pioneer SX450 Receiver
Pioneer PL112D Turntable
Shure M75ED Type 2 Cartridge
Pair Wharfedale Linton 3XP Speakers

Our Price £245·00

PIONEER SX535 SYSTEM

Pioneer SX535 Receiver
Pioneer PL115D Turntable
Shure M75ED Type 2 Cartridge
Pair KEF Chorale Speakers

Our Price £280·00

AKAI AA1020 SYSTEM

Akai AA1020 Receiver
Pioneer PL112D Turntable
Shure M75ED Type 2 Cartridge
Pair KEF Chorale Speakers

Our Price £294·00

ROTEL RX402 SYSTEM

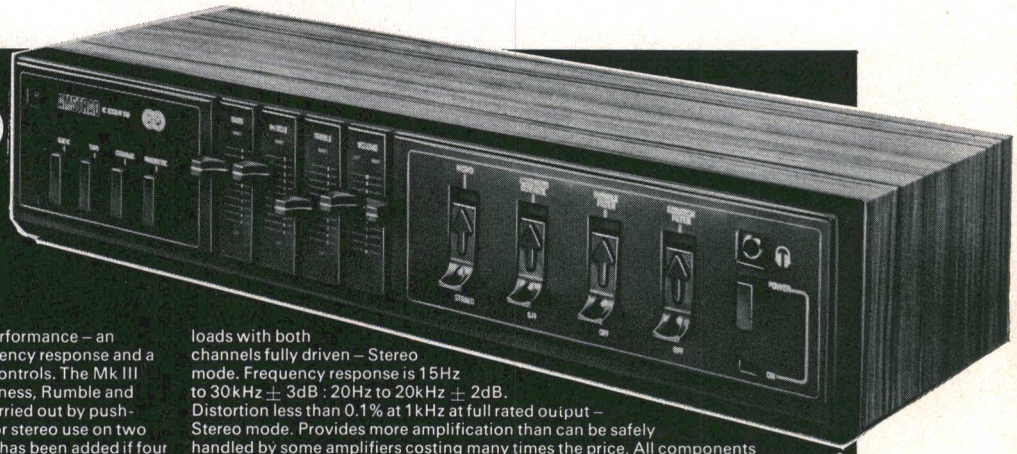
Rotel RX402 Receiver
Pioneer PL112D Turntable
Shure M75ED Type 2 Cartridge
Pair KEF Chorale Speakers

Our Price £282·00

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AMSTRAD

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IC2000

Mk III STEREO AMPLIFIER

100 WATTS · 25 WATTS R.M.S. PER CHANNEL INTO 8 OHMS

The IC2000 Mk III, completely new in both looks and performance – an increased power handling and output with a wider frequency response and a lower distortion factor with slide potentiometers for all controls. The Mk III has new style fingertip switches for Stereo/Mono, Loudness, Rumble and Scratch filters, and interlocking of all other facilities is carried out by push-button selectors. The amplifier is designed specifically for stereo use on two loudspeakers but the additional facility of Quadrosound has been added if four speaker reproduction is required. These advanced technical refinements have been enclosed in a teak effect cabinet, with black fascia and black function buttons.
The IC2000 Mk III performs with a powerful 25 watts per channel into 8 ohm loads with both channels fully driven – Stereo mode. Frequency response is 15Hz to 30kHz ± 3dB : 20Hz to 20kHz ± 2dB. Distortion less than 0.1% at 1kHz at full rated output – Stereo mode. Provides more amplification than can be safely handled by some amplifiers costing many times the price. All components are mounted on printed circuit boards. Employed in the IC2000 Mk III is a regulated power supply to ensure maximum performance in output and minimum distortion at high listening levels.
Size : 44mm x 168mm x 92mm.

BRITISH MADE



3000

Mk II TUNER LW/MW/FM

WITH INBUILT AUTOMATIC STEREO MPX DECODER
2uV FM SENSITIVITY – MUTING CONTROL – AFC CONTROL

The 3000 Mk II is a quality Tuner in the Amstrad tradition, incorporating not only an excellent Very High Frequency F.M. receiver section complete with it's phase locked loop decoder, but also including an AM radio section which provides reception on long and medium waves. The built-in ferrite rod aerial operates on medium and long waves, giving strong powerful reception over the wide waveband spectrum – AFC being provided on the FM section to positively lock on and hold the frequency from drift. The FM section is linked to a stereo beacon which is automatically activated when stereo broadcasts are being transmitted. The 3000 Mk II is compatible with virtually any amplifier, Tape Deck and Recorder, and will perform with most stereo systems. The cabinet is teak effect finish with contrasting black consol and amber illuminated pointer, lime green tuning scale, and green illuminated tuning meter.
Size : 365mm x 155mm x 95mm.

BRITISH MADE

8000

Mk III STEREO AMPLIFIER

40 WATTS : 10 WATTS R.M.S. PER CHANNEL INTO 8 OHMS

Amstrad 8000 Mk. III the stereo Amplifier built for qualitative sound reproduction, and long term reliability. The comprehensive and attractively furnished consol is designed for instantaneous adjustment. The manifold characteristics include : Slider Bass and Treble controls, individual Volume Controls ; a unique loundess switch for widespread listening ; rumble and scratch Filter switches ; frontal jack socket for stereo headphones ; ceramic, magnetic, tape and radio inputs, and output for tape, four rearset outputs for normal stereo or quadrosound listening. All this and much more besides in a beautiful teak finished unit.
Size 330mm wide x 197mm deep x 78mm high



BRITISH MADE

AMSTRAD the top deck

7050

NEW IMPROVED TOP-LOADING DOLBY STEREO CASSETTE DECK

After months of development and experience gained from our previous model 7000, we now proudly present the new, improved 7050. Now designed with a seven key, high quality precision TAPE TRANSPORT MECHANISM and incorporating a new integrated circuit "Dolby System". Features include : ■Fast Forward, Rewind ■Stop ■Pause ■Eject ■Improved Autostop, incorporating a Micro drag Reed Sensor System ■Facility for CRO² tape ■Twin VU Meters ■Microphone Inputs ■Variable output, making playback possible on most amplifiers and hi-fi units ■Twin Record Level slider controls, for accurate recordings from most hi-fi systems ■Improved life azimuth matched Record/Playback Heads ■Headphone output socket. Now included is a special Tape Monitor feature for amplifiers with tape monitor facility Tape Digit Counter ■Lower harmonic distortion of 0.8% ■Improved Wow & Flutter and Frequency Response Neatly styled in an ultra slim, low profile cabinet with matt black trim, and professional beige colour VU Meters. Size : 370mm wide, 220mm deep, 85mm high.



TP12D

TURNTABLE

BELT DRIVE · SOLID DIE CAST PLATTER
RUMBLE –47dB · WOW & FLUTTER 0.1%

The TP12D Turntable has taken a decade to develop, and although contemporary in looks, its design is principally functional and of prime importance. The tri-lateral peripherally weighted platter produces an equiponderate tangential counterbalancing force- the platter being solid die-cast, combines to permit it to revolve at more constant speed, thereby limiting wow and flutter to a minimum. The drive is by a 16-pole synchronous motor with belt drive minimising rumble. The tone arm is of 'S' shape and specifically designed for minimum tracking error, and employs a lightweight detachable headshell thus reducing wear on the sides of the record groove. The arm is counterbalanced by an adjustable weight and has a low friction precision bearing and bias compensator and damped Cue control. The TP12D is mounted on a teak finished solid mount with low profile Perspex cover, complete with power cord and 5-pin DIN audiolead ready to connect and play.
Size : 445mm × 356mm × 140mm.



see over

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Please send illustrated literature and address of nearest stockist

- ☐ Amstrad IC2000 Mk III
- ☐ Amstrad 3000 Mk II
- ☐ Amstrad 8000 Mk III
- ☐ Amstrad 7050
- ☐ Amstrad TP12D

Tick box for item(s) of interest.

Name _____

Address _____

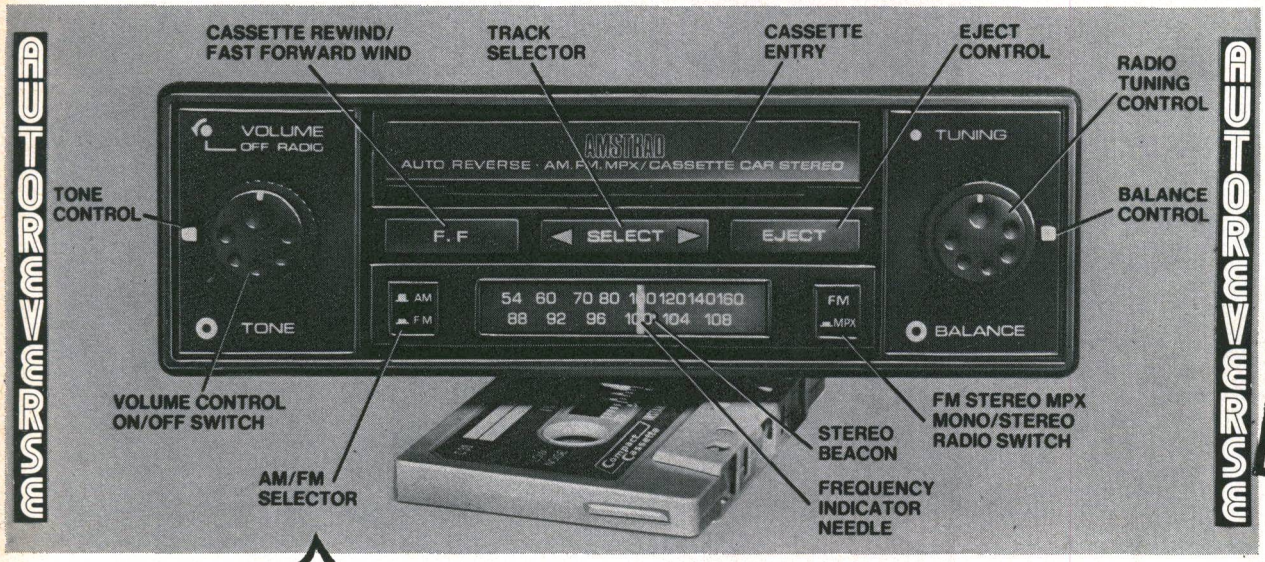
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HFN 1

AMSTRAD in car



9050 AM/FM (FM STEREO MPX)

IN DASH FITTING CAR RADIO STEREO CASSETTE PLAYER with AUTOREVERSE

20 WATTS:– 5 WATTS R.M.S. PER CHANNEL INTO 4 OHMS Suitable for most Negative earth cars.

No longer do you have to change the tape from side to side. The machine just keeps on playing until the end of the track, and then changes to the other track; it will carry on doing this until the Stop/Eject button is activated.

Features Include: *FM (STEREO) RADIO *MW MEDIUM WAVE RADIO *TRACK SELECTOR *REWIND/FAST FORWARD Button *MONO/STEREO SWITCH for FM RADIO *BALANCE CONTROL *TONE CONTROL

This unit is supplied complete with a pair of shelf mounting loudspeakers and radio mounting bracket.

MODEL 9050 AROUND £78

Rec. Retail Price £102.08

9000 AM/FM (FM STEREO MPX)

IN DASH CAR STEREO RADIO AND CASSETTE PLAYER

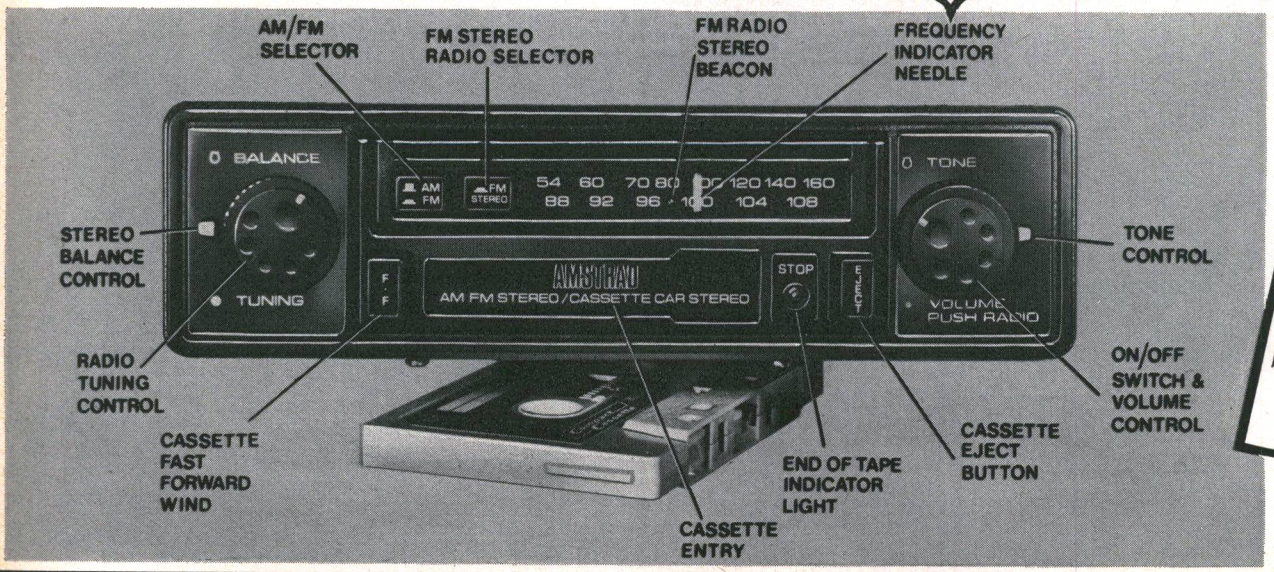
16 WATTS:– 4 WATTS R.M.S. PER CHANNEL INTO 4 OHMS Suitable for most Negative earth cars.

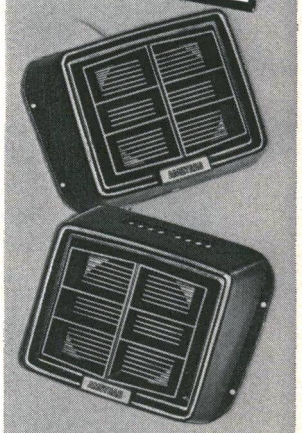
In dash fitting Car Radio Stereo Cassette Player

FM (Stereo) Radio Reception and MW Medium Wave.

Features include: *FAST FORWARD CONTROL MONO/STEREO SWITCH for Stereo Radio *TONE CONTROL *EJECT CONTROL *BALANCE CONTROL *AUTOSTOP LIGHT

Included with this unit is a pair of shelf mounting loudspeakers and a fixing bracket for the main radio unit.





SPEAKERS

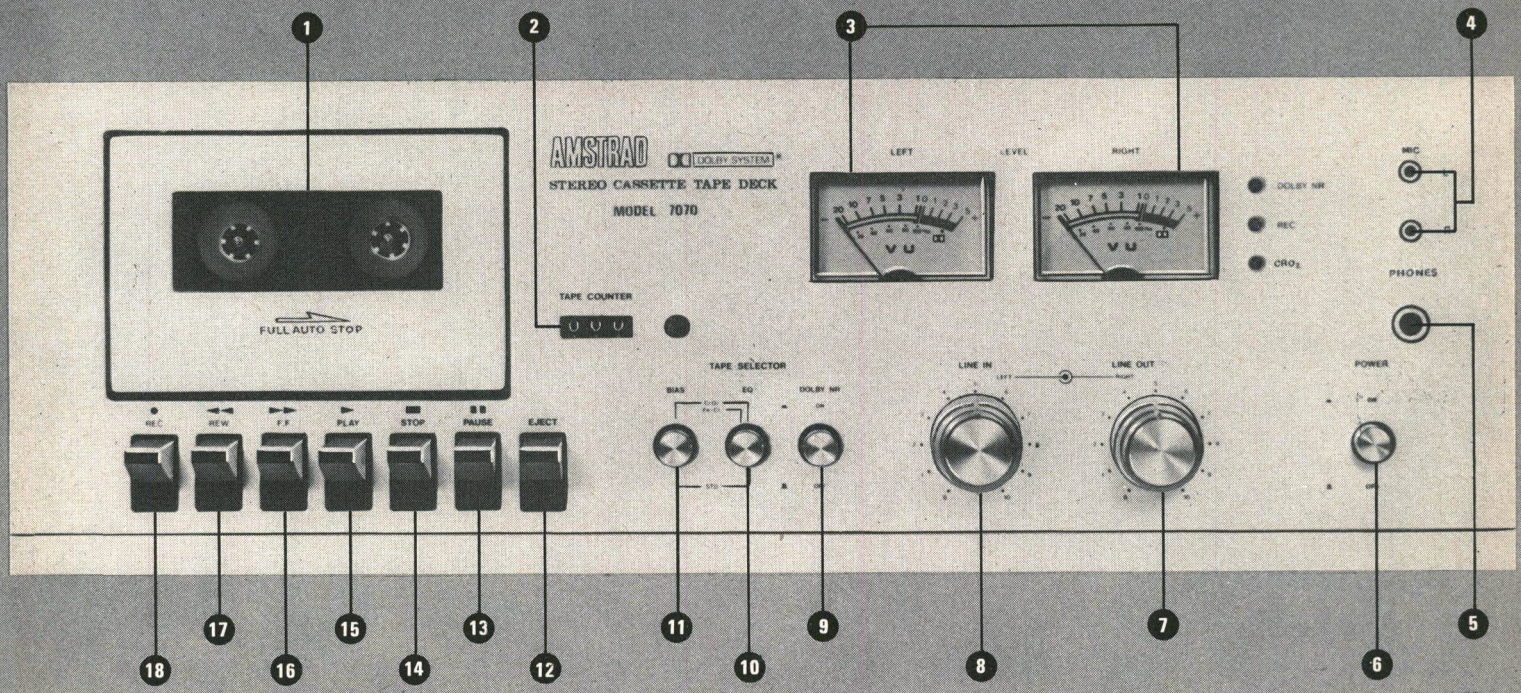
Large 10.5cm cone, heavy magnet. Shelf mounting, finished in black. Size: 105mm x 185mm x 150mm

MODEL 9000 AROUND £59

Rec. Retail Price £77.42

AMSTRAD * DOLBY SYSTEM 7070

Front Loading Cassette Deck



Amstrad introduce you to the Front Loading 7070 Dolby System Cassette Machine. A black finish, anti-hum metal cabinet sets of the brush grained silver-finish Front Panel which carries the Cassette Door and all the controls. This unit is suitable for use with most Amplifiers and Hi-Fi Systems on the market. It has a variable output from 0 – 1000mV, and it's design is such that it enables you to stack other units in your system on top, giving easy access to the cassette machine. Other features include :

●FULL AUTO STOP ●Frequency Response 25Hz – 17,000 Hz ●Wow and Flutter 0.08% ●Chromium Dioxide and Ferric Chrome Tape Facility.

Size : 420mm x 145mm x 255mm

1 Front Loading Cassette Door
2 Tape Digit Counter
3 VU Meters
4 Microphone Inputs
5 Headphone Socket
6 Power Switch
7 Line Out – Left and Right
8 Line In – Left and Right
9 Dolby In Switch
10 CRO_2 & Fe Cr_2 Switch
11 Bias Switch
12 Eject Button
13 Pause Button
14 Stop Button
15 Play Button
16 Fast Forward Button
17 Rewind Button
18 Record Button

see over

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☐ Amstrad 9050
☐ Amstrad 9000
☐ Amstrad 7070

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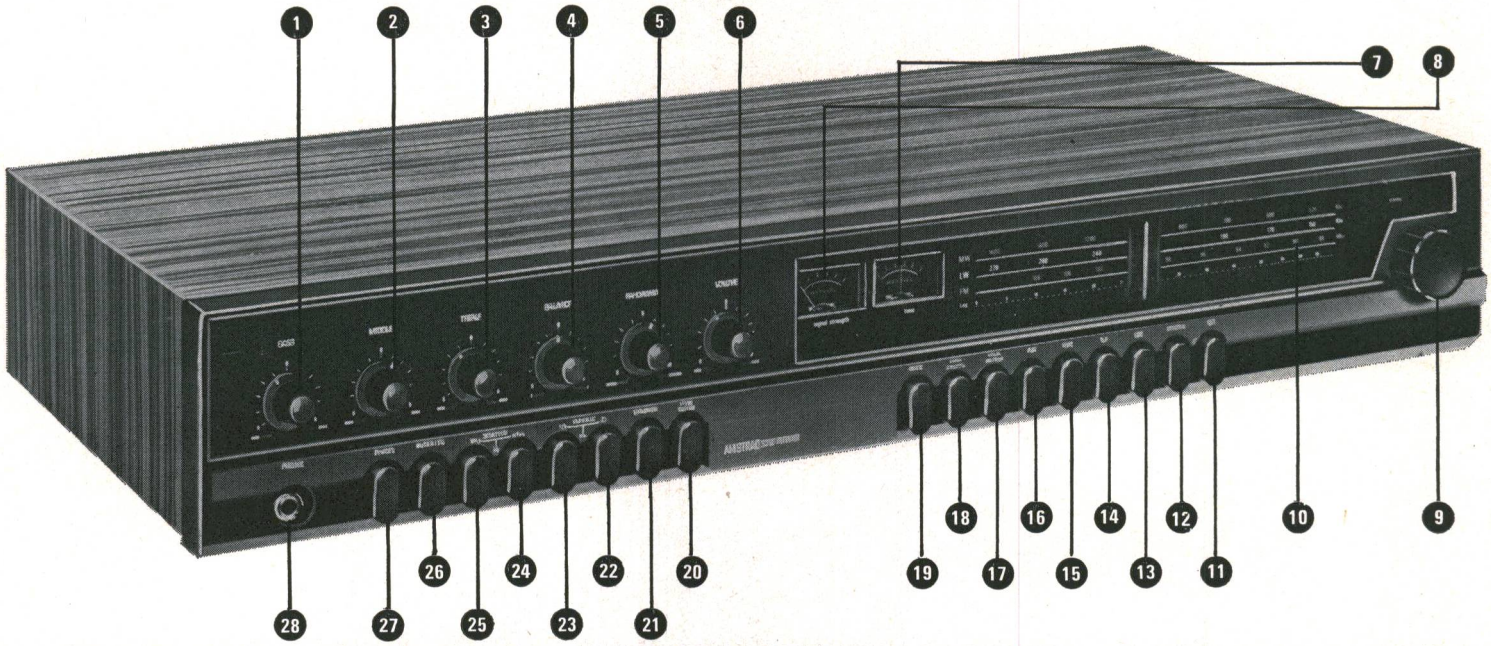
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Get AMSTRAD into your system

BRITISH MADE



5050 Stereo Receiver

100 WATTS: 25 WATTS RMS PER CHANNEL INTO 8 OHMS
2 µV FM Sensitivity • FM/MW/LW

The new Amstrad 5050 Tuner Amplifier is designed with all the facilities we could possibly imagine to put on a Receiver. Such items as Panorama, High Blend and Quietness controls only to be found on units costing double the price. Other features include: *Wide Frequency Response of 15Hz – 30kHz ±3dB *Distortion of the Amplifier section of 0.05% THD *Magnetic Cartridge Turntable, and Auxiliary input *Inputs for Tape In and Out, together with variable controls enabling you to easily match to virtually any Tape or Cassette Machine *In-built MPX Stereo Decoder *Medium and Long Wave radio bands.

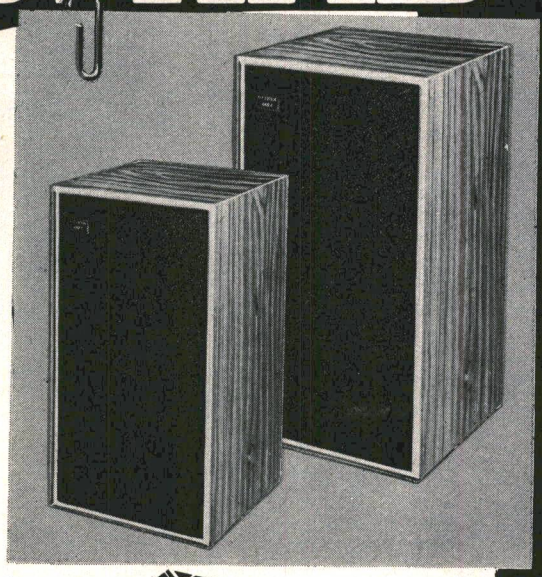
The unit has a matt black face plate with Grey and White printing; the dial scale is a multi coloured "Blackout" back illuminated type, complimenting the sheerline teak effect Cabinet.

BRITISH MADE

Size: 660mm x 110mm x 280mm

1 Bass Control
2 Middle Control
3 Treble Control
4 Stereo Balance Control
5 Panorama Control
6 Volume Control
7 FM Tuning Meter
8 Signal Strength Meter
9 Radio Tuning Knob
10 3 Wave Band Tuning Scale
11 FM (AFC) Button
12 Phono Pickup Button
13 Aux. Input Button
14 FM Radio Button
15 Medium Wave Button
16 Long Wave Button
17 Tape Monitor Button
18 Tape Correct Button
19 FM Muting Button
20 High Blend Button
21 Loudness Button
22 Rumble Filter 2
23 Rumble Filter 1
24 Scratch Filter 2
25 Scratch Filter 1
26 Quietness Button
27 Power Button
28 Headphone Jack

AMSTRAD



AMSTRAD

ACOUSTRA SPEAKERS

- UNIQUE IN DESIGN
- SUPERB IN PERFORMANCE

Ideal for horizontal or vertical Floor or Shelf mounting
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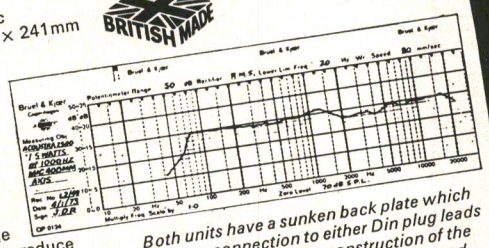
ACOUSTRA 2500

Power handling – 25 watts RMS.
Frequency response – 35. 17,000Hz.
8" Long throw bass unit, cone made of a rigid paper with a foam roll surround. 3⅜" mid-range treble unit. Speakers are front mounted to reduce tunnelling effects. Also employed is a crossover unit consisting of highly accurate wound coils and electrolytic capacitors. Dimensions 488mm × 253mm × 241mm

BRITISH MADE

ACOUSTRA 1500

Power Handling – 15 watts RMS.
Frequency response – 45. 17,000Hz.
Enclosure Type – Acoustic Suspension.
Impedance – 8 ohms. 6½" Long throw bass unit, cone made of a rigid paper with a foam roll surround. 3⅜" mid-range treble unit. Speakers are front mounted to reduce tunnelling effects. Also employed is a crossover unit consisting of highly accurate wound coils and electrolytic capacitors.
Dimensions 368mm x 260mm x 222mm deep.



Both units have a sunken back plate which allows a connection to either Din plug leads or Bare wire leads. The construction of the cabinets is such that they are air tight and the insides are padded with special acoustic wadding.



AMSTRAD

HPS6A STEREO HEADPHONES

The well proven HPS6A Stereophones are designed for the discerning listener, providing remarkably faithful reproduction across a wide frequency range. The headphones exhibit exceptional holding properties between bass and mid range bands and have features often only included on more expensive units ■ Lightweight 500 gram construction ■ Separate volume controls on each earpiece ■ Frequency Response 20Hz – 25kHz ■ 8 ohm nominal impedance ■ Cord extends to 4 metres ■ Suitable for most Amplifiers, Tape Decks and Hi-Fi Systems ■ Special Mylar Cone for wider frequency response. Finished in matt black with soft black cushioned earpieces.



AMSTRAD 6000 STEREO CASSETTE TAPE DECK

The Amstrad 6000 Stereo Cassette Deck features: ■ Autostop ■ Fast Forward, Rewind ■ Stop/Eject ■ Noise Reduction Circuit Switch ■ CRO_2 Switch for use with CRO_2 tapes ■ Slider Controls which control both Recording Level and Output Level, making this machine suitable for most amplifiers and hi-fi systems ■ Tape Digit Counter ■ Headphone Output Socket ■ Twin Microphone Inputs ■ Two large illuminated VU Meters ■ Excellent Wow & Flutter figures together with wide Frequency Response.

Finished in teak colour cabinet with silver and black trim on the top face. Size: 314mm wide, 231mm deep, 111mm high.

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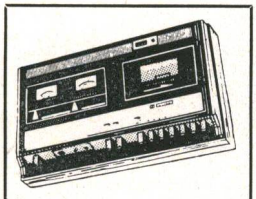
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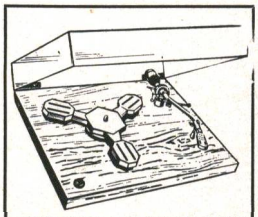
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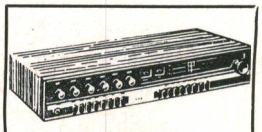
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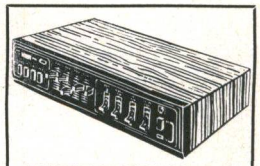
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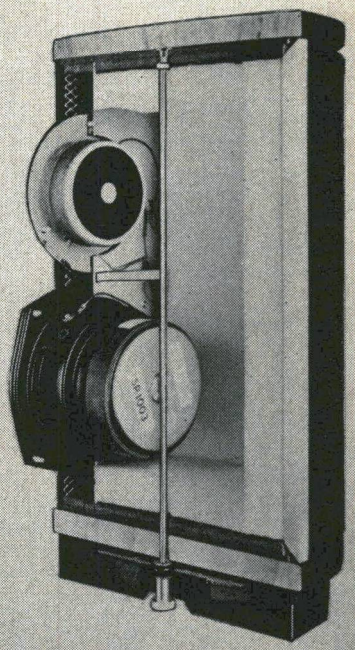
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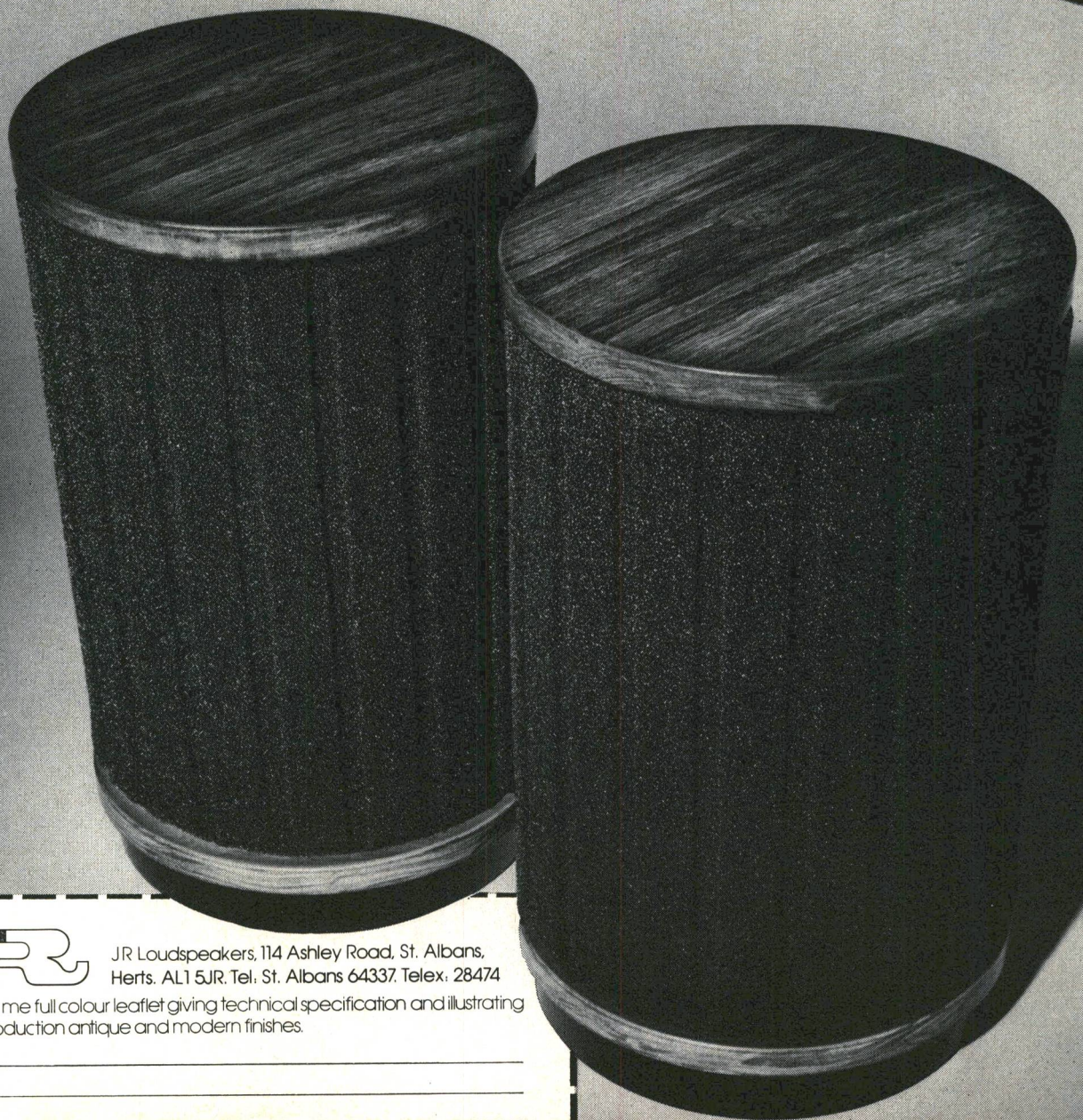
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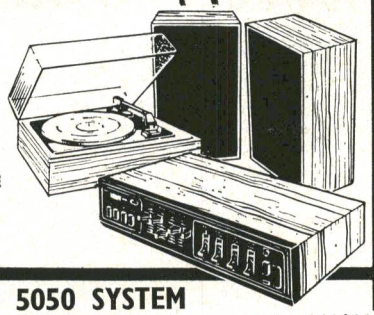
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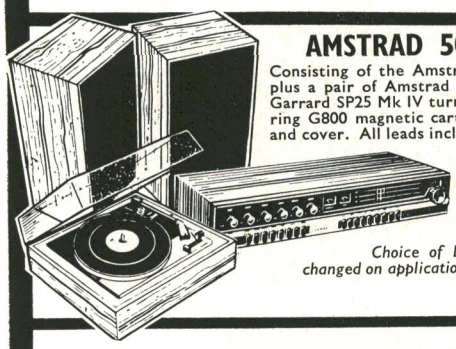
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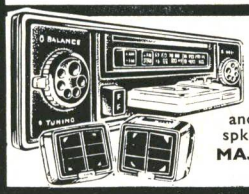
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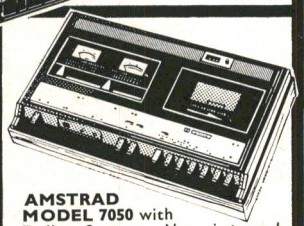
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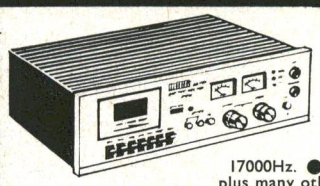
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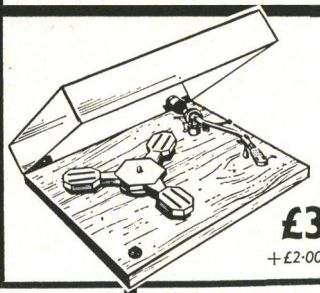
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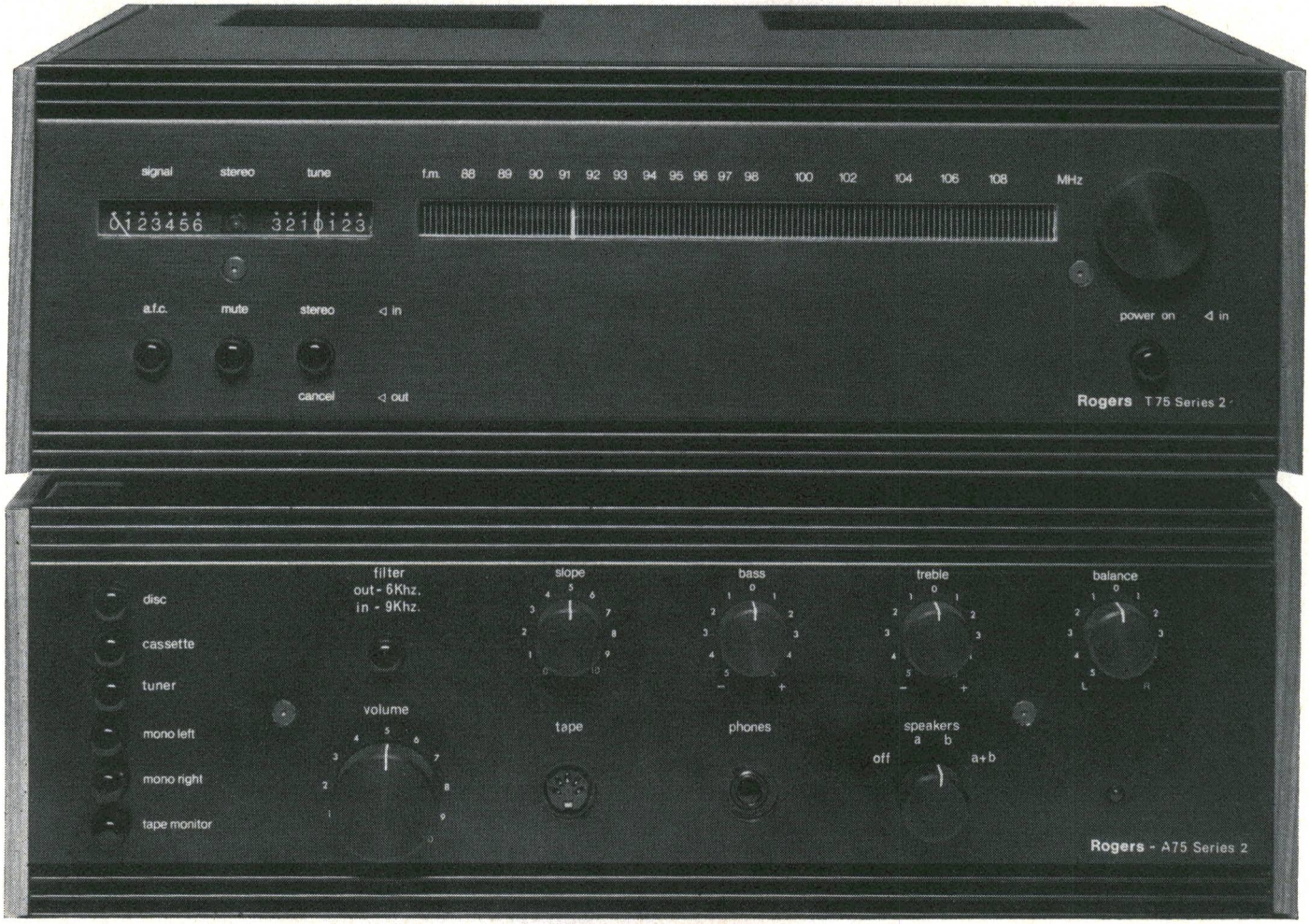
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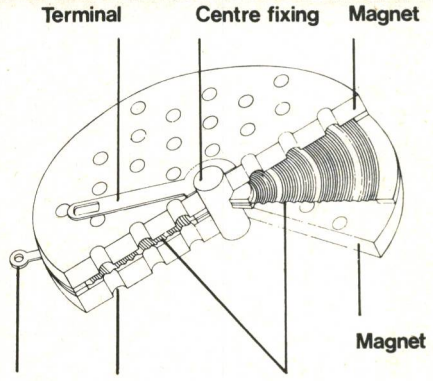
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Goodmans Audiomax 12AX	£48·00
Goodmans Axiom 402	£22·00
Goodmans Audiom 8p	£7·00
Goodmans Audiom 10p	£7·25
Goodmans Audiom 12p	£18·00
Goodmans Audiom 15p	£26·45
Goodmans Audiom 18p	£44·50
Helme	P.O.A.
Jordan Watts Modules	£15·50
Jordan Watts HF units	£7·00
KEF T27	£5·90
KEF B110	£8·00
KEF B200	£9·40
KEF B139	£20·50
KEF DN13/SP1015	£5·25
KEF DN13/SP1017	£4·40
KEF DN12	£6·75
Lowther PM6	£29·00
Lowther PM6 I	£31·00
Lowther PM7	£50·50
Peerless DT10 HFC	£8·25
Peerless K010 DT	£7·25
Peerless K040 MRF	£9·50
Peerless MT225 HFC	£2·75
Richard Allan CG8	£8·25
Richard Allan CG8T	£8·50
Richard Allan LP8B	£8·50
Richard Allan HD8T	£13·25
Richard Allan HP8B	£13·50
Richard Allan CG10T	£14·00
Richard Allan CG12T	£15·00
Richard Allan CG15	£31·00
Richard Allan HD12T	£19·50
Richard Allan HD15T	£31·00
Tannoy 10″ Monitor HPD	£75·00
Tannoy 12″ Monitor HPD	£82·00
Tannoy 15″ Monitor HPD	£97·00
Wharfedale WMT2	85p
Wharfedale 800 and 3000 XO	£1·75

RECEIVERS

Carriage, £2·50

Armstrong 625 and 626	P.O.A.
Eagle AA28	*£95·50
Eagle AA30	*£110·00
Goodmans Module 90	£125·00
Goodmans Module 110	£145·00
Goodmans Module 120	£145·00
Goodmans Module 150	*£207·00
Goodmans Mod 110 Compact	*£195·00
Lux R600, R800, R1500	P.O.A.
Nikko STA8080	*£157·00
Onkyo Y3A	*£103·50
Pioneer SX300, SX450, SX550	P.O.A.
Rogers Ravensbrook	£97·00
Tandberg TR1000, TR1010	P.O.A.
Teleton	P.O.A.
Trio KR2400, KR3400, KR4400	P.O.A.

AMPLIFIERS

Carriage, £2·50

Armstrong 621	P.O.A.
Cambridge Audio P60	P.O.A.
Eagle	P.O.A.
Goodmans 40-40	£79·00
Lecson	P.O.A.
Lux L30, L80, L100, L85V	P.O.A.
Nikko TRM230	*£58·50
Nikko TRM500	*£83·00
Nikko TRM210	*£45·00
Pioneer SA5300, SA6300, SA7300	P.O.A.
Quad 33, 303, 405	Callers only
Rogers A75/II	£128·00
Rogers Ravensbrook	£57·00
Sugden A48/II, A21, P51, C51	P.O.A.
Tandberg TA300	P.O.A
Teleton	P.O.A.
Trio KA1200, KA3300, KA3500	P.O.A.

TUNERS

Carriage, £2·50

Armstrong 623 and 624	P.O.A.
Cambridge Audio T55	P.O.A.
Eagle	P.O.A.
Lux T33, T88, T110	P.O.A.
Nikko FAM220	*£59·00
Motion Electronics (TV)	P.O.A.
Pioneer TX5300, TX7500, TX9500	POA
Quad FM3	Callers only
Rogers T75 II	£92·00
Rogers Ravensbrook	P.O.A.
Sugden R21, R51	P.O.A.
Tandberg TP43 (Portable)	P.O.A.
Teleton	P.O.A.
Trio KT1300, KT3300, KT3500	P.O.A.

TURNTABLES

Carriage charges:— Chassis, £2·50. Complete with plinth and cover, £3·00.

Ariston RD11	P.O.A.
Connoisseur BD1 kit	£12·75
Connoisseur BD2/SAU2 chassis	£31·50
Connoisseur BD2 P & C	£41·50
Connoisseur BD2A P & C	£47·50
Connoisseur BD3 P & C	£73·25
Dual CS701, CS601, CS501	P.O.A.
Garrard SP25 IV chassis	£20·50
Garrard SP25/IV Mod & M756	£37·00
Garrard 125SB Mod & M756	£48·00
Garrard 86SB Mod & M756	£66·00
Garrard GT55P Mod & M75ED	£101·00
Garrard DD75 Mod & M75ED	£96·00
Garrard 401 Chassis	£60·00
Goldring Lenco L65	*£55·00
Howland West HW1 (P & C only)	£20·00
Linn Sondek LP12	P.O.A.
Philips GA312	P.O.A.
Pioneer PL112D/PL115D	P.O.A.
Transcriptors Ref less arm	£107·00
Transcriptors Ref and fluid arm	£132·00
Trio KP1022, KD2033, KD5033	P.O.A.
Thorens TD160BC	£78·00
Thorens TD160C	£95·00
Thorens TD126BC	£173·00
Thorens TD126C	£217·00
Thorens TD145C	£112·00
Thorens TD125 chassis	£93·00
Thorens TD125AB & TX25	£154·00
Thorens TD166C	£83·00

Accessories: Bib, Colton, Pixall, SME, Vac-O-Rec, Zerostat, Transcriptors.

ARMS

Postage, 75p each

Acos Lustre	*£25·50
Connoisseur SAU2	£13·50
Colton MC101	£20·00
Formula 4	P.O.A.
Grace G707	P.O.A.
SME 3009 Fixed head	£42·50
SME 3009 Detachable head	£46·50
Transcriptors Fluid	£27·00

CARTRIDGES AND STYLII

Postage, 25p each

	Cartridge	Stylus only
ADC Q30	£6·75	£4·50
ADC Q32	£9·25	£6·30
ADC Q36	£12·00	£7·25
ADC VLM II	£20·00	£9·50
ADC XLM II	£25·00	£11·25
ADC Super XLM	£43·00	£18·75
Audio Technica		P.O.A.
Decca London	£26·00	—
Connoisseur SCU1	£6·25	£2·25
Empire 2000E	£9·50	£7·25
Empire 2000E/I	£13·75	£9·75
Goldring G850	£4·75	£4·00
Goldring G820	£7·25	£4·00
Goldring G820E	£10·50	£7·00
Goldring G820SE	£14·75	£12·25
Ortofon VMS20E	£22·50	—
Ortofon M15ES	£37·50	£21·75
Philips GP400	£8·75	£5·00
Philips GP401	£12·00	£7·00
Philips GP412VE	£28·75	£12·50
Philips GP422	£43·50	£21·00
Shure M75B	£10·00	£5·80
Shure M75ED/II	£14·50	£10·75
Shure M75EJ	£12·25	£7·60
Shure M95ED	£18·20	£14·50
Shure M95EJ	£12·60	£8·50
Shure M3D	£5·00	£4·50
Shure M55E	£7·75	£7·50
Shure M756S	£7·00	£5·15
Shure V15/III	£44·00	£16·25
Stanton 500A	£15·75	£9·25
Stanton 681EEE	£50·50	£26·00

HEADPHONES

Postage £1·00 per pair

Clark 75	*£9·00
Clark 250	*£18·00
Howland West	P.O.A.
Peerless PMB6	£25·50
PWB Moving Coil	*£16·00
Dynax	£20·00
Electrostatic and Box	£40·00
Pioneer	P.O.A.
Sennheiser HD414X	*£14·50
Sennheiser HD424X	*£21·00
Sennheiser HD400	*£10·00
Sennheiser HD224	*£37·00
Stax	P.O.A.

TAPE DECKS

Carriage, £2·50

Aiwa AD1300, 1600, 1800	P.O.A.
Dual C901, C919	P.O.A.
Pioneer CTF2121, CTF9191	P.O.A.
Teleton CD100	*£63·00
Tandberg 2041X	*£108·00
Tandberg 3541X, 3641X, 9141X, 1021X	P.O.A.
Tandberg TCD310/330	P.O.A.
JVC 1740	P.O.A.
Trio KX620	P.O.A.

BLANK TAPES

Postage 75p per order

BASF LH 7″			£3·50
EMI Professional 7″			£2·00
EMI Professional 10½″			£5·50
TDK Audua 7″			*£3·00
TDK Audua 10½″			*£8·00
AGFA PE36 10½″			£8·25
	C60	C90	C120
BASF Super LH	85p	£1·15	—
EMI Hi-Dynamic	56p	75p	—
EMI X1000	*60p	*80p	—
Fuji SL	75p	£1·00	—
Fuji SX	£1·00	£1·50	—
TDK DC	*70p	*£1·00	*£1·30
TDK SD	*75p	*£1·00	*£1·30
TDK ED	*95p	*£1·30	—
TDK SAC	£1·25	£1·75	—
Audua	£1·00	£1·45	—
Memorex	80p	£1·15	—

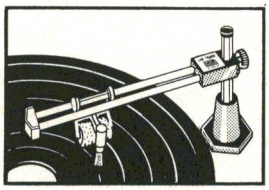
ITEMS MARKED * ARE SPECIAL OFFERS ON LIMITED STOCKS ONLY. NOT ON ACCESS OR B/CARD. Please check prices and availability before ordering/calling as prices are subject to alteration without notice. ALL PRICES ARE INCLUSIVE OF VAT AT 12½%, TAPES AT 8%. Advice and leaflets always sent on request, please send stamped addressed envelope.

Access and Barclaycard welcome. Cheques accepted with adequate identification only. Personal Export scheme available to callers. We are situated on the A503 close to Walthamstow Town Hall. Trains—Walthamstow Central. Buses—123, 275, 276, 262, 69, W21, 251, 718. E. & O. E.

Our resistance is low.



The new*Lin-track linear cleaning arm has a negligible effect on speed.



It's a new concept,but so simple you'll wonder why no-one thought of it before.

It's compact,has low mass (below 0.5 grams) and will not affect the playing speed.

The independently pivoted brush tracks in the record groove at precisely the correct angle,while the velvet pad picks up surface grime.

With minimum height and overhang it will fit most turntables.

At £2.98 inc. VAT it's a small price to pay for really clean records.

Metrocare. More good sound ideas. *Patent applied for.

METROSOUND

Thorens Metrocare Accessories
Metrosound Audio Products Ltd., Audio Works, Cartersfield Road, Waltham Abbey, Essex EN9 1JF. Tel: Lea Valley 712712.

50% DISCOUNT MAC

On BASF and MEMOREX cassettes

CASSETTE	C45		C60		C90		C120	
	ONE	TEN	ONE	TEN	ONE	TEN	ONE	TEN
BASF L/H			48p	£4.60	65p.	£6.40	87p	£8.40.
BASF S/M SUPER			71p	£6.80	87p.	£8.50	£1.20	£11.75
BASF CrO2			£1.00	£9.85	£1.23	£12.10	£1.60	£15.80
MEMOREX MrX2	53p	£5.10	64p	£6.20	86p	£8.40	£1.20	£11.80
MEMOREX CrO2	69p	£6.80	87p	£8.50	£1.19	£11.40		
T.D.K. S/DYNAMIC	62p	£6.00	69p	£6.70	93p	£9.20	£1.29	£12.80
T.D.K. E/D	80p	£7.90	93p	£9.20	£1.30	£12.80		
T.D.K. DYNAMIC	46p	£4.50	53p	£5.00	73p	£7.25	99p	£9.75
SCOTCH HI-ENERGY	60p	£5.80	69p	£6.70	87p	£8.50		
SCOTCH CrO2	65p	£6.30	85p	£8.35	£1.05	£10.20		
SCOTCH CLASSIC	£1.01	£9.90	£1.28	£12.60	£1.65	£16.30		
PHILIPS			44p	£4.20	63p	£6.20	81p	£8.00

VIDEO CASSETTES

PHILIPS	V.C. 30	£10.25	V.C. 45	£13.10	V.C. 60	£15.25
SCOTCH	V.C. 30	£9.25	V.C. 45	£12.15	V.C. 60	£13.90

REEL-TO-REEL

BASF L/H RECORDING TAPE IN LIBRARY CASE	5¾" Long Play 1200,	one	£2.43	ten	£24.00
	5¾" Double Play 1800,	one	£3.26	ten	£32.00
	7" Long Play 1800,	one	£3.15	ten	£31.00
	7" Double Play 2400,	one	£3.95	ten	£39.00
BASF SUPER RECORDING TAPE IN LIBRARY CASE	5¾" Long Play 1200,	one	£2.60	ten	£25.50
	5¾" Double Play 1800,	one	£4.00	ten	£39.00
	7" Long Play 1800,	one	£3.62	ten	£35.75
	7" Double Play 2400,	one	£4.82	ten	£47.75
MEMOREX	7" Long Play 1800,	one	£2.26	ten	£22.45
	7" Double Play 2400,	one	£2.82	ten	£27.90

All items in makers packaging and fully guaranteed. All prices include V.A.T. P & P to be 55p per order.

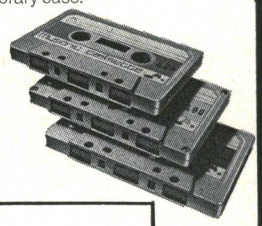
Mail order only to:
MAC Dept. A, 31 Wallis Close, Wilmington, Kent

MAC

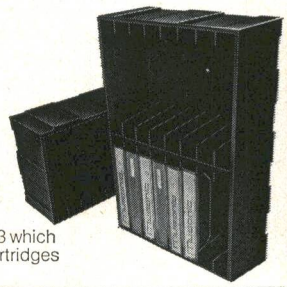
Musonic care that you care

Cassettes
Professional quality Low Noise cassettes in flip top library case.

MT1 C60
MT2 C90
MT3 C120



Add 'n' stac
A unique flexible storage system. Each interlockable. Module holds 8 cassettes.
MT12



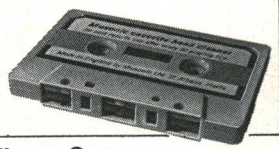
also MT13 which hold 6 cartridges

Cassette Library
A vinyl covered carry case holding 30 cassettes.
MT10



also MT17 holding 24 cartridges.

Cassette Head Cleaner
Ensures sound reproduction.
MT18



MT16 Library Case
MT5 (MT18+MT16)

Musonic

Musonic Ltd. 34–38, Verulam Road, St. Albans, Herts AL3 4DF.
Telephone St. Albans 50611.

Prices shown are inclusive of the appropriate rate of V.A.T. and were correct at time of going to press. — See Musonic products now at all good Hi-Fi and Record stores or send SAE for catalogue of full range.

ALL THE BEST IN HI-FI & AUDIO AT THE UK's KEENEST PRICES!

Wicks

WICKS FOR VALUE
- THE BEST PRICES
- FULL SERVICE AND BACK-UP
- DEMONSTRATIONS
- FULL RANGE OF EQUIPMENT IN STOCK ALL THE TIME



STEREO RECEIVERS

	Rec. Price	Disc. Price
Aiwa AX7500	£210·20	P.O.A.
Armstrong 625 FM	£179·00	P.O.A.
Armstrong 626 AM/FM ..	£207·00	P.O.A.
Pioneer SX450	£156·33	£114·00
Pioneer SX550	£193·26	£142·00
Pioneer SX650	£271·26	£199·00
Pioneer SX750	£322·80	£239·00
Pioneer SX850	£430 45	£319·00
Pioneer SX950	£494 20	£369·00
Pioneer SX1250	£757·80	£534·00
Rotel RX102 ..	£107·50	£78·00
Rotel RX152 ..	£124·50	£89·00
Rotel RX202 ..	£137·50	£95·00
Rotel RX402 ..	£192·50	£129·00
Rotel RX602 ..	£244·50	£164·00
Rotel RX802 ..	£307·50	£210·00
Sony STR7015	£134·95	P.O.A.
Sony STR7025	£149·95	P.O.A.
Sony STR7035	£169·95	P.O.A.
Yamaha CR200	£112·44	P.O.A.
Yamaha CR400	£159·30	P.O.A.
Yamaha CR450	£189·00	P.O.A.
Yamaha CR600	£229·50	P.O.A.
Yamaha CR800	£229·70	P.O.A.
Yamaha CR1000	£449·10	P.O.A.

TUNERS

Armstrong 623	£125·00	P.O.A.
Armstrong 624	£98·64	P.O.A.
Pioneer TX5300	£96·40	£68·00
Pioneer TX7500	£189·42	£133·00
Pioneer TX9500	£261·87	£183·00
Rotel RT224 ..	£79·90	£59·00
Rotel RT324 ..	£102·50	£73·00
Rotel RT624 ..	£149·90	£107·00
Sony ST70 ..	£59·95	P.O.A.
Sony ST88 ..	£69·95	P.O.A.
Sony ST2950F	£99·95	P.O.A.
Sony ST3950 ..	£154·95	P.O.A.
Sony ST4950 ..	£169·95	P.O.A.
Sony ST5130 ..	£208·29	P.O.A.
Cambridge T55	£102·60	P.O.A.
Yamaha CT400	£109·80	P.O.A.
Yamaha CT600	£149·40	P.O.A.
Yamaha CT800	£199·80	P.O.A.

STEREO AMPLIFIERS

Armstrong 621	£118·00	P.O.A.
Cambridge P60	£128·52	£126·00
Leak 2200 ..	£145·80	£112·00
Pioneer SA5300	£85·86	£60·00
Pioneer SA6300	£105·71	£79·00
Pioneer SA7300	£160·34	£115·00
Pioneer SA7500	£237·63	£169·00
Pioneer SA8500	£301·36	£199·00
Pioneer SA9500	£404·24	£265·00
Pioneer SA9900	£599·77	£399·00
Rotel RA312 ..	£89·90	£64·00
Rotel RA412 ..	£109·90	£79·00
Sony TA70 ..	£59·95	P.O.A.
Sony TA88 ..	£69·95	P.O.A.
SonyTA1630	£84·95	P.O.A.
Sony TA2650	£109·95	P.O.A.
Sony TA3650	£154·95	P.O.A.
Sony TA5650	£229·95	P.O.A.
Sony TA3140	£109·31	P.O.A.
Sony TA8650	£549·95	P.O.A.
Quad 33 Control Unit ..	£87·75	P.O.A.
Quad 303 Power Amp. ..	£95·62	P.O.A.

TURNTABLES

	Rec. Price	Disc. Price
Pioneer PL112D	£80·76	£58·95
Pioneer PL115D	£90·02	£64·95
Sansui SR212 ..	£63·21	£47·65
Sony PS1350 ..	£77·95	P.O.A.
Sony PS2350 ..	£84·95	P.O.A.
Sony PS4750 ..	£139·95	P.O.A
Sony PS6750 ..	£169·95	P.O.A.
Technics SL20	Prices on request	
Technics SL23		
Technics SL1500		
Technics SL1300		
Technics SL110		
Yamaha YP450	£74·70	P.O.A.
Yamaha YP701	£99·00	P.O.A.
Yamaha YP800	£199·80	P.O.A.

Special Offer
PIONEER PL15R
£59.00

SPEAKERS

Acoustic Research		
AR7X.. ..	£92·00	P.O.A.
AR10	£505·00	P.O.A.
AR11	£385·00	P.O.A.
AR16	£150·00	P.O.A.
Bowers & Wilkins		
DM2A ..	£197·77	P.O.A.
DM4	£140·94	P.O.A.
Celestion		
Ditton 15 ..	£124·15	£85·00
Ditton 25 ..	£262·53	£179·00
Ditton 33 ..	£190·57	£128·00
Ditton 44 ..	£227·06	£154·00
Ditton 66 ..	£374·58	£250·00
UL6	£106·42	P.O.A.
UL8	£133·65	P.O.A.
UL10	£202·50	P.O.A.
KEF		
Coda	£61·88	P.O.A.
Cantor ..	£73·12	P.O.A.
Chorale ..	£90·00	P O.A.
Cadenza ..	£146·26	P.O.A.
Concerto ..	£191·26	P.O.A.
104	£208·12	P.O.A.
Kit 1	£66·38	P.O.A.
Kit 3	£120·33	P.O.A.
Leak		
2030	£113·40	£79·95
2060	£178·43	£125·95
2075	£473·40	£299·00

Although all reasonable care is taken to ensure that details published in this advertisement are correct, no responsibility can be accepted for any errors or omissions. Prices are subject to change without prior notice and goods advertised are subject to availability.

	Rec. Price	Disc. Price
Monitor Audio		
MA1 Ser II ..	£281·25	P.O.A.
MA3 Ser II ..	£364·50	P.O.A.
MA4	£177·75	P.O.A.
MA5 Ser II ..	£135·00	P.O.A.
MA7	£83·81	P.O.A.
Quad Electro-static ..	£310·50	P.O.A.
Sony		
SS70 pair ..	£26·00	P.O.A.
SS5088 pair ..	£51·90	P.O.A.
SS5177 pair ..	£65·90	P.O.A.
SS5300 pair ..	£105·90	P.O.A.
SS3050 pair ..	£159·90	P.O.A.
SS5050 pair ..	£259·90	P.O.A.
Wharfedale		
Denton 2XP ..	£54·70	£37·75
Linton 3XP ..	£79·50	£53·95
Spendor BC/I	£231·52	P.O.A.
Spendor BC/II	£247·05	P.O.A.
Spendor BC/III	£446·40	P.O.A.
Tannoy Arden	£414·00	P.O.A.
Tannoy Berkeley	£362·26	P.O.A.
Tannoy Cheviot	£285·76	P O.A.
Tannoy Devon	£270·00	P.O.A.
Tannoy Eaton	£243·00	P.O.A.

TAPE DECKS & RECORDERS

Sony TC377 ..	£179·95	P.O.A.
Sony TC458 ..	£279·95	P.O.A.
Sony TC645 ..	£269·95	P.O.A.
Sony TC755 ..	£399·95	P.O.A.
Sony TC756/2	£439·95	P.O.A.
Akai 4000DB ..	£200·25	£169·00
Akai 4000DS ..	£152·55	£124·00
Akai GXC265D	£336·15	£275·00

CASSETTE TAPE DECKS & RECORDERS

Akai GXC75D	£232·65	£149·50
Akai CS34D ..	£123·75	£99·95
Akai GXC39D	£167·85	£128·00
Akai GXC310D	£197·55	£142·00
Akai GXC325D	£274·05	£210·00
Aiwa AD1300	£162·41	P.O.A.
Aiwa AD1600	£224·60	P.O.A.
Aiwa AD1800	£262·87	P.O.A.
Aiwa AD6500	£229·88	P.O.A.
Aiwa AD3060	£247·96	P.O.A.
Sony TC133 ..	£119·95	P.O.A.
Sony TC117 ..	£77·95	P.O.A.
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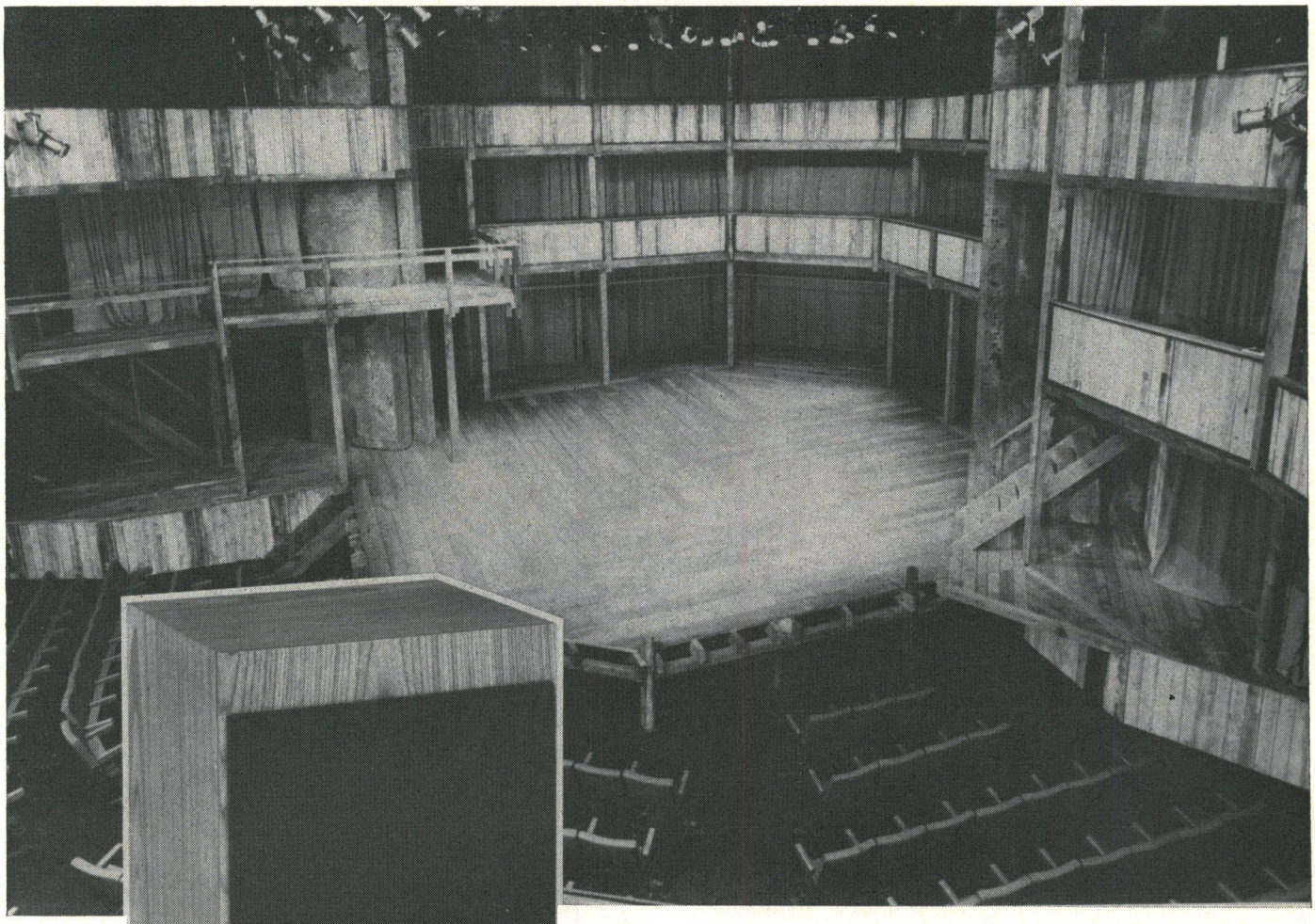
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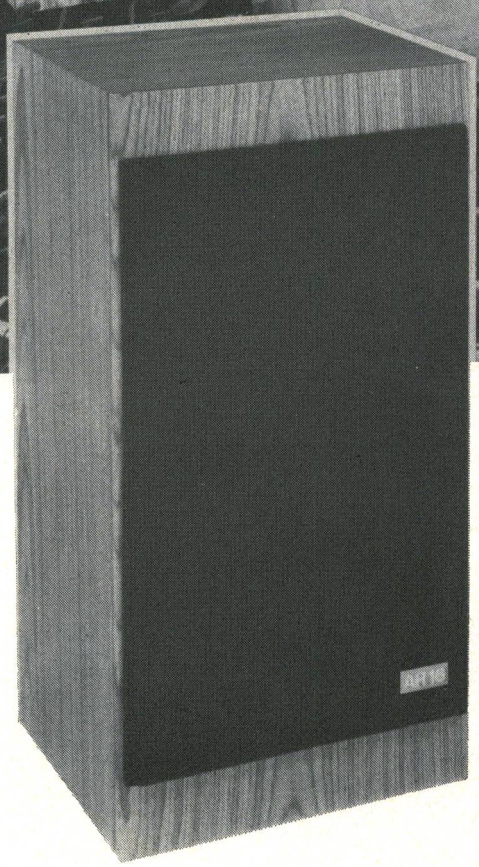
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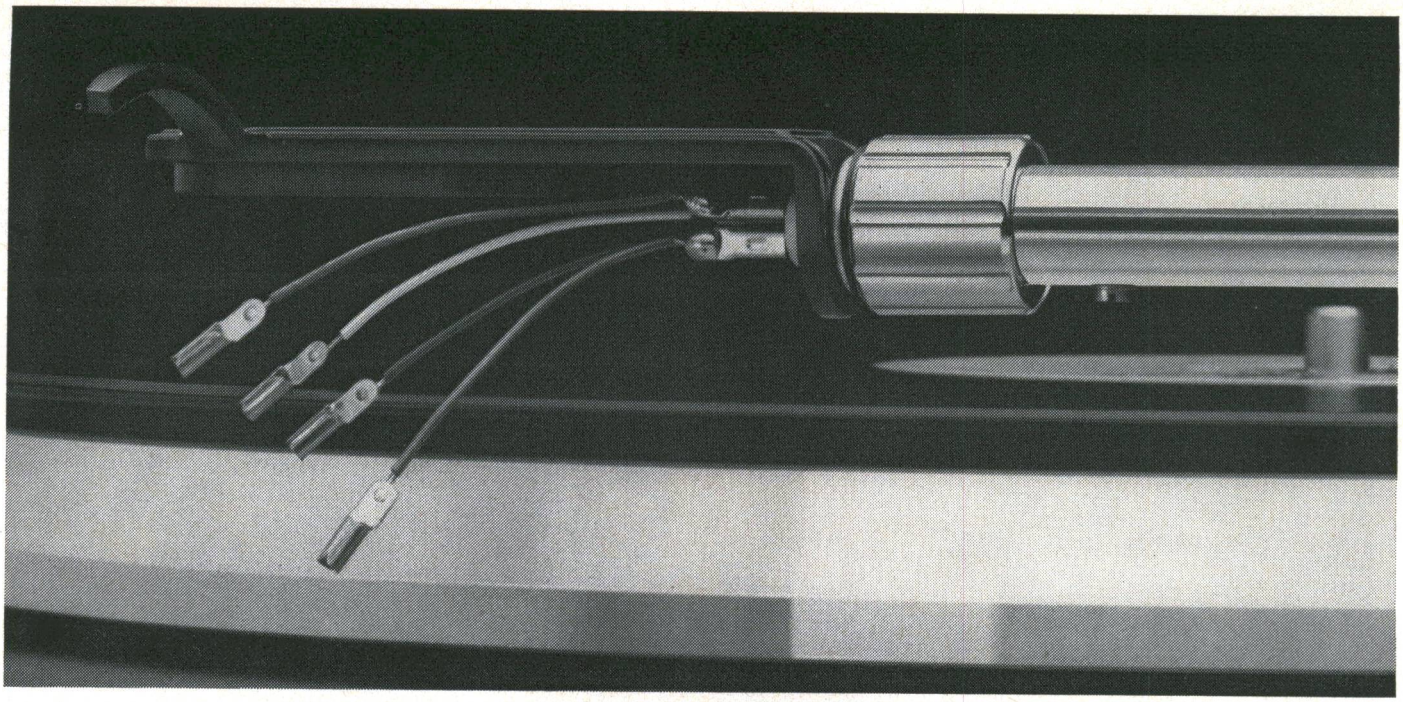
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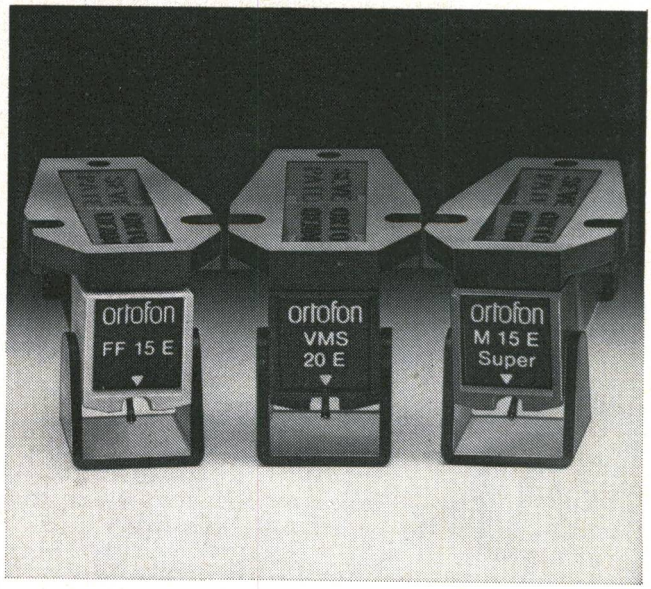
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THE LINK HOUSE GROUP

JUST after penning last month's remarks for this column, which ended by asking whether the time had come to deflect the gramophone's Gadarene swine before they drag good stereophony into the quadraphonic abyss, we received a copy of a BBC article about development of the Matrix H system.* In an audio world dominated by commercial pressures and a degree of cut-throat competition, this makes refreshing reading. With no prior commitment to a particular commercial quadraphonic mode—a system perhaps rushed into use to forestall or oust another—the BBC team have been able to conduct careful tests to reveal what listeners actually *hear* when receiving sounds from various directions, both real and simulated, and subject to various phase and amplitude differences.

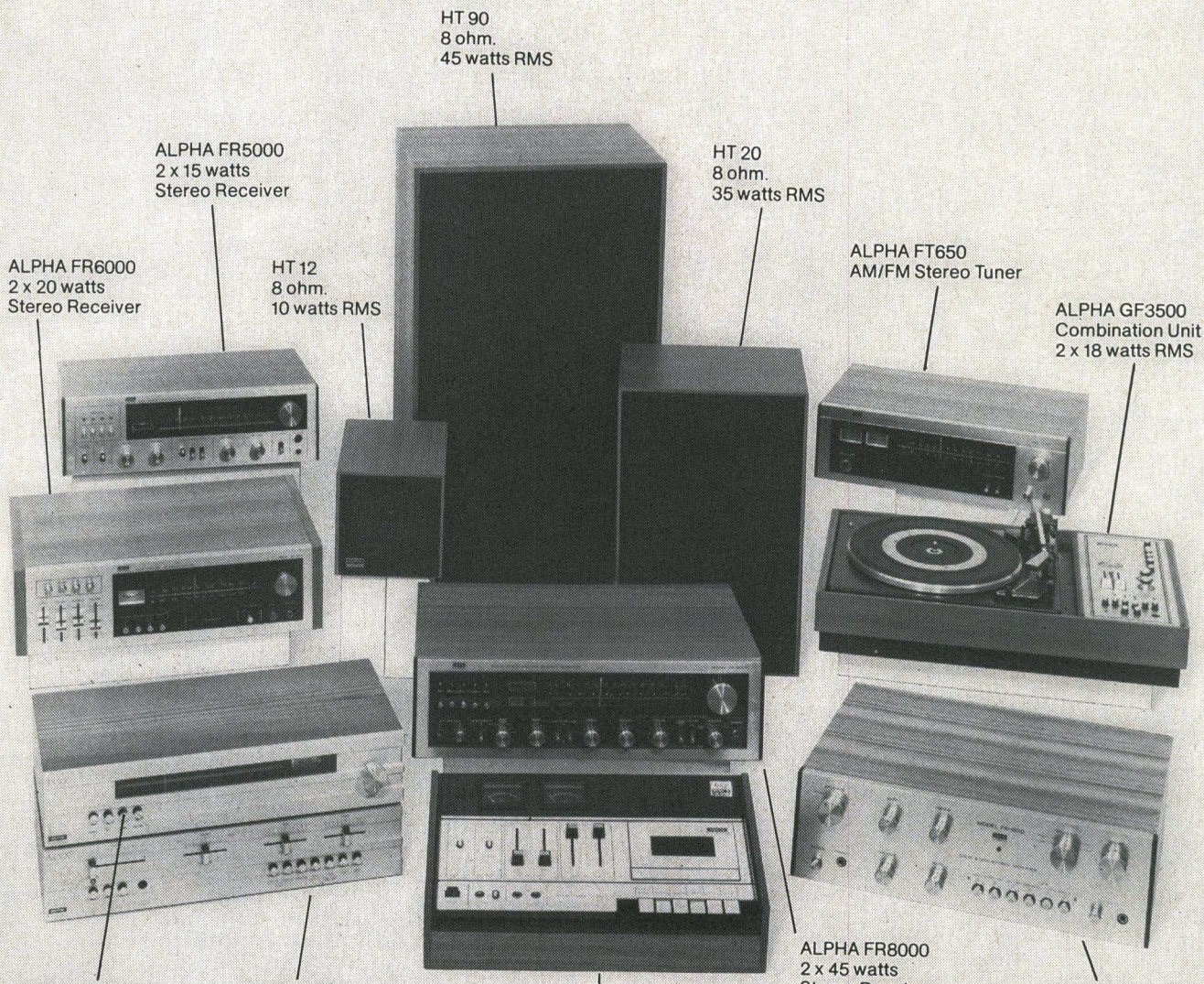
Some of these data have no doubt been researched by the record companies, but the combination of academic thoroughness and absence of business pressures inspires a confidence in the resulting matrix proposals which it is difficult to muster for the competing commercial systems. We have done our best to provide the means for a fair comparison of the latter via the medium of our *Quadrafile* album, which also covers the pilot-tone systems. But comparing subtleties in the reproduction of quadraphonic program material doesn't reveal how that material might have sounded if balanced also for optimum stereo. It is possible degradation of the latter in the course of producing matrix four-channel recordings that is now beginning to worry people, and which triggered last month's questions.

The BBC has a deeper commitment to 'compatibility' than the purely technical one of getting signals unscathed through a 4-2-4 system. It is deeply concerned also with the aesthetics of stereo, and with the fact that an overwhelming majority of its customers will be listening simply in mono or stereo for the foreseeable future. To narrow the image or introduce artificial 'tunnels' of reverberation on the frontal sound-stage for millions, in order to accommodate quadraphony for thousands, goes sorely against the grain, yet both phenomena are creeping into commercial matrix recordings. The QS and SQ systems vary somewhat in this respect (indeed Matrix H can be regarded as in some ways a variant of QS) and it could be that one of the pilot-tone systems will eventually win the day; but if our eventual four channels are to be derived from a 4-2-4 matrix, it would seem that the BBC's is the most sensible and thoroughly thought-out.

A perennial problem with two-channel stereo centres around the 'stereo seat' syndrome, whereby one can only recreate the intended image accurately by sitting on a line bisecting the angle subtended by the loudspeakers. Avoidance of image degradation in other positions demands special loudspeakers with radiation patterns contrived to overcome Haas-effect, an achievement ranging from difficult to impossible. With quadraphony the 'impossible' dominates, for not only is the listener initially confined to a point rather than to a line, but dependence on the small phase and amplitude differences between the signals obtained from a 4-2-4 matrix decoder means that the slightest move away from the stereo seat introduces massive spatial distortions in all directions. Also, the theoretical means of overcoming lateral image shift by means of loudspeaker loudness contradicts the analogous requirement for fore-and-aft stability. This has all led to increasing use of logic-enhancement, to which, we are intrigued to see, the BBC are giving serious consideration. Don't rush it, Auntie, but do let us have a suitable decoder circuit sometime during this, sound recording's centenary year.

* *The development of a compatible 4-2-4 quadraphonic matrix system, BBC Matrix H* by D. J. Meares and P. A. Ratliff (reprint published by the Technical Centre of the European Broadcasting Union, Avenue Albert Lancaster 32, B-1180 Brussels, Belgium.

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NEWS FROM THE WORLD OF SOUND

Pro-Ac Rule?

A new loudspeaker designated 'Pro-Ac' from the Celef design team was introduced at a small exhibition held at the Holiday Inn, Swiss Cottage by the Sheffield Audio Centre in November. Revox and BGW equipment was used with KLH 9 and Dayton-Wright XG8III loudspeakers as references.

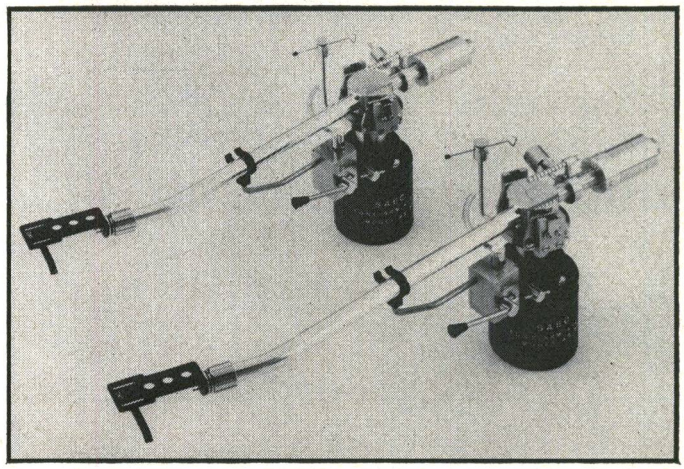
Although expensive (£570 per pair) the Pro-Ac has some very exciting design features. It is small, about 50 l. (2 cu. ft.) and hence visually unobtrusive, yet is quite efficient and can handle high powers. Considerable efforts have been made to combat cabinet resonances: a four layer wood/laminate skin receives four layers of internal acoustic damping.

The 'high transient tweeter' is veiled in secrecy (but not sound) and is 'of a design rarely seen in hi-fi loudspeakers, in fact we believe we are the first to use them in a moving-coil hi-fi loudspeaker'. Although exhibitions are not the place for snap value judgements, the Pro-Acs sounded most impressive, with surprising efficiency, bass performance and fine HF. Still, they *should* be good at that price.

Further details from: Cultureworth Acoustics, 284 Glossop Road, Sheffield S7 2HS.

Expanding Gale

Gale Electronics and Design Ltd. have established two subsidiary distribution companies in France and the USA: Gale Electronics France SARL, 44 rue de la union, 9300 Bobigny, France (near Charles de Gaulle Airport); and Gale Electronics of America Inc., 348 East 84th Street, New York City. As far as we know, the American operation is only the third British audio firm to set up a US subsidiary after Plessey and BSR. Both companies will distribute the Gale range of loudspeakers and turntables, as well as the new Maximum Fidelity gramophone records, all of which are manufactured in London. Gale are now seeking high quality professional and consumer audio products by other British manufacturers who are looking for distribution in these countries.



New SAEC Pickup Arm

The SAEC range of Japanese pickup arms are now available in the UK. The two models in the range, the WE 308-NEW and the WE-308L, which only differ in arm length, feature a concealed double knife edge bearing assembly with rubies used as the thrust bearing and a laterally balanced base plate, and SAEC's so called *Ultimate* headshell, which combines extremely low resonance and 7·3 g mass with high rigidity. Although detachable, this headshell is joined to the arm with a beryllium-copper spring washer which alleviates alignment and movement problems and which, the makers claim, makes it equal in performance to a non-detachable headshell. The Japanese have now announced an improved model, the WE 308 SX which features the new ULS-3X headshell (the result of a long research programme), which is made from high purity sintered aluminium oxide. This material, chemically similar to corundum, is very resistant to twisting forces and is said to introduce virtually no coloration. A range of accessories is available and includes a massive arm stabiliser which screws to the base of the arm and minimises acoustic feedback and improves the S/N ratio. SAEC products are imported into the UK by Zeepa Instruments Ltd., 15 Richmond Grove, Surbiton, Surrey, and although we haven't yet had a price for the new arm, the WE 308-NEW costs £99·50 plus VAT.

Audio Fair 77

Olympic Rumblings!

When the Olympia Audio Fair was cancelled last July, the organisers, Iliffe Promotions Ltd, were insistent that the cancellation, caused by the economic cold weather of last year, was in fact a postponement, and plans have now been drawn up for the 1977 Audio Fair to be held at Olympia from September 12th to the 18th, with the first day and a half set aside for the trade. There will be a programme of both technical and entertainment shows to tie in, and rather than catering for specialists only, they intend to 'take account of the increased family demand for sound and visual home entertainment'. Despite the success of recent hotel-based exhibitions, Iliffe state that 'Olympia is the only venue with the appropriate size, scope and facilities ... the glamour and excitement of a bustling exhibition, the provision of purpose-built studios, the attraction of large public demonstration theatres—these are only possible in the setting of Olympia'. Quite a hard sell, and several manufacturers and distributors, including National Panasonic (Technics), JVC and Shure, have already made firm bookings. Pessimists, however, could point out that 1976's economic cold weather could well last until October, so watch this space for developments.

Sound 77

And still they come! News has reached us of a New Year audio show, Sound 77, to be held at the Excelsior Hotel, Manchester Airport from January 20th to 23rd inclusive. The promoters, Hardman Radio, have carefully chosen the venue as being reasonably central for the North West, and are following recent shows in preferring the more intimate atmosphere of hotel suites to a large hall for effective product demonstration. Over 50 manufacturers and distributors will be showing their latest ranges and the exhibition will also include lectures, film and audio shows, and Manchester's commercial radio station, Piccadilly Radio, will be staging live broadcasts from the show. Hardman Radio have arranged ample car-parking facilities, and admission will be free.

Aiwa, where are you?

In our October News Column we announced that the Japanese Aiwa company, whose products had previously been distributed by Johnson's of Hendon, were to set up their own subsidiary company, Aiwa Sales and Service (UK) Ltd. We unfortunately printed the wrong address, and for those people who have been scouring London looking for Aiwa, here is the correct one—Aiwa Sales and Service (UK) Ltd., 30/32 Concord Road, Westwood Park Trading Estate, Western Avenue, Acton, London W3 OT8. *tel.* 01-993-1673.

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ROTEL		
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RX 202 Mk. II	137.50	**99.90**
PIONEER		
PL 112D	80.76	**59.95**
SX 450	156.33	**116.50**
WHARFEDALE		
DENTON 2 X P	54.70	**42.50**
LINTON 3 X P	79.50	**59.50**
CELESTION		
DITTON 15	115.03	**85.90**
DITTON 44	206.41	**154.50**
AMSTRAD		
7050	92.81	**73.50**
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sound 7
North West Audio & Hi-Fi Exhibition

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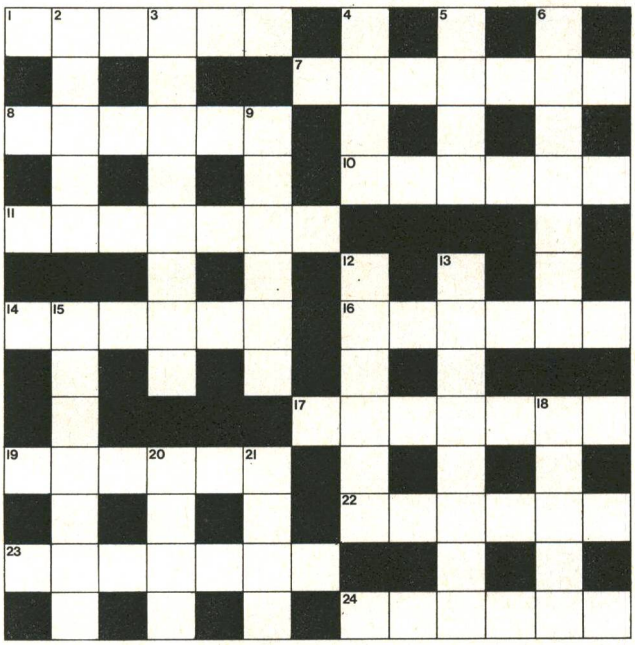
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FREE Admission

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20212223 JANUARY

Crossword devised by Maurice Taggart



CLUES ACROSS

1 Musical top gear, announced by poster otherwise. (6)
7 Celebrated pianist provides lone performance early in the week. (7)
8 Sacred music from Mozartian themes. (6)
10 (See **21** down.)
11 Tom and Ian get a note to play in a lively manner. (7)
14 About nine, then almost ten, it emerges that the music is to die away to nothing. (6)
16 Roy and Leo arrangement for lutenist Anthony. (6)
17 Hang Joy, otherwise producer of famous ballad opera. (4-3)
19 Able somehow, about fortissimo, to support the loudspeakers. (6)
22 He returns about disordered jail for this oratorio. (6)
23 (See **24**.)
24 (and **23**) Italian operatic conductor who died in 1968. (6-7)

CLUES DOWN

2 (and **12**) Quiet start to recorded performance, or special motorway lane for new cars. (3-2-6)
3 Ann and chums get together somehow for a romantic composer. (8)
4 Note on note for an ancient percussion instrument. (4)
5 Induction device provided by Arctic oil-rigs. (4)
6 Old Italian dance which Alf and Nero collaborate in somehow. (7)
9 The Master's offspring, and female progenitor of a record family. (6)
12 (See **2**.)
13 Prize-winning recording pianist. (4-4)
15 May, Les and I collaborate in a Fantasy by Balakirev. (7)
18 Famous violin makers in drama timeless in appeal. (5)
20 Nearly hot stuff, this rhythmic drum figure. (4)
21 (and **10** across) Russian pianist presented in confusion by Giles, Lil and me. (4-6)

A £3 record token will be awarded to each of the first five correct solutions picked from those which arrive by January 5th.

News continued

Sheffield Hi-Fi Expo

This hi-fi exhibition, organised by Micron Audio of Sheffield and Chesterfield, was held at the Hallam Tower Hotel, Sheffield, from November 5th. to 7th. and must certainly rank among the most successful of the regional audio shows supplementing the big national Audio Fairs in London and Harrogate. The facilities offered to exhibitors and public alike by the Hallam Tower Hotel were very good.

Twenty-eight separate demonstration rooms and eight stands accommodated products and representatives from almost fifty leading manufacturers, and around ten thousand people passed through, listening, appraising and discussing. The promoters have every right to take pride in the results of their considerable efforts.

In spite of the large numbers attending, a leisurely and intimate atmosphere prevailed. Five lecture-demonstrations were held in the Lecture Theatre: John Wright of IMF spoke about Monitor Loudspeakers; Arthur Dakin, of Tandberg, gave some hints for the improvement of tape recordings on both cassette and open-reel machines; John Greenbank, of Tangent, presented 'The Confessions of a Speaker Manufacturer'; Bert Webb, of this magazine, talked about pickups and arms, and David Inman, of Celestion, discussed the choice of speakers.

It is impossible in a short report to do more than mention just a few of the newer products on show: a nice, relatively small speaker, the Maramba, from Richard Allan ($23\frac{1}{2} \times 9\frac{3}{4} \times 8\frac{1}{2}$ ins.) first seen at Harrogate in September, which employs two drive units, and an ABR; the Harrison–Chapman ST 200 FM/AM tuner with five pre-set stations and digital frequency display; the Elcaset System from Sony, now reaching dealers; the British fabricated Pyral tape in cassettes and open reels; new turntables from Monitor Audio and Michell; the latest Delphic A-DL-2 Acousta model, and prototype Ultimo pickup arm from Lowther, and much more.

Public reaction is always of the greatest interest on these occasions, not least when it accords with our own, and while there is no doubt that very few people indeed went away unhappy, several tours of the exhibition at different times, and conversations with visitors, confirmed our impression that a number of exhibitors were not making the best of their products, due to the material chosen for demonstration and a mistaken estimate of public taste.

The first, and much smaller Sheffield Hi-Fi Exhibition was arranged by Micron Audio and held in the same place in September 1973; we doubt if another three years will elapse before the next one. We certainly hope not.

TV Breakthrough

In August, we published a letter from a reader who was experiencing interference on his hi-fi from the Crystal Palace TV transmitter. Woollett Electrostatistics, a S.E. London firm run by L. G. Woollett, have informed us that they now provide a preventive service for people with this problem who live within a radius of some 20 miles from the transmitter. Woollett Electrostatics can be contacted at Anerley Station Road, London SE20 8PY.

dbx misunderstanding

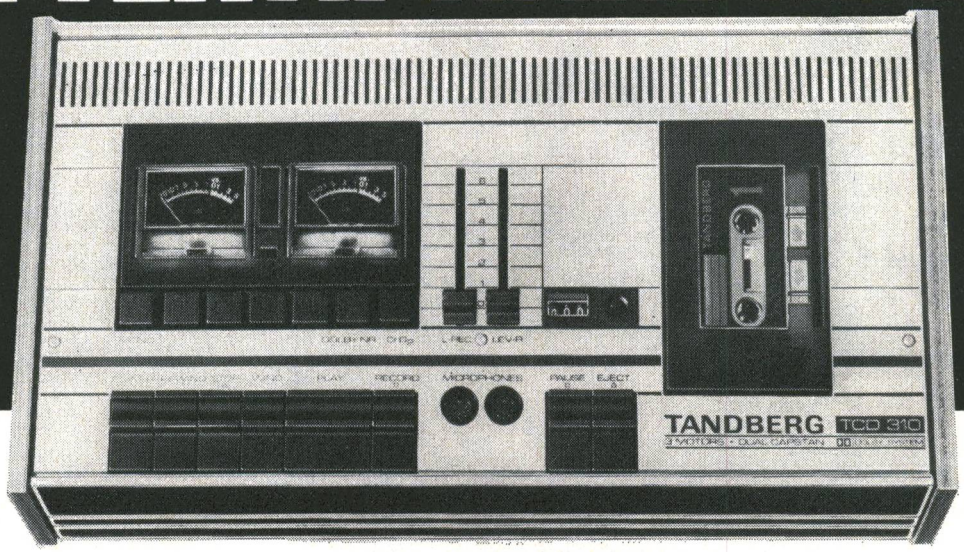
In the October issue I wrote an article largely extolling the virtues of the *dbx* 120 series of complementary noise reduction equipment. Unfortunately a picture, depicting a dbx 117 Dynamic Range Enhancer, was inadvertently slipped into the article, and this seems to have caused considerable confusion about the nature of the equipment under discussion.

The article dealt specifically with the 120 series equipment and was in no way connected with either of the 117 or 119 units manufactured by the same company. The latter serve only to clean up or modify material after it has been recorded; the efficacy with which they do this remains a subject for discussion. The dbx 120 units process and deprocess before and after recording (respectively) with the sole intention of eliminating noise *during* the tape recording process in a similar manner to Dolby. *Frank Ogden*

Compander Capacitors

Readers have been having difficulty in obtaining from Radiospares the 0·068 μF capacitors specified in R. H. Wallace's article on the construction of a *Simple Compander* (Oct/Nov). Radiospares in fact do not stock a capacitor of this value and the R.S. catalogue number given in the components list was therefore incorrect. Since these capacitors are only included in the design for their action in decoupling the battery supply in order to prevent parasitic oscillation or feedback between the two channels, their value is not critical and any value from 0·047 μF to 0·1 μF, or even more, would be suitable. A convenient capacitor, which has the advantage of being physically small, is the 0·1 μF polyester capacitor, R.S. Cat. no. 113/049.

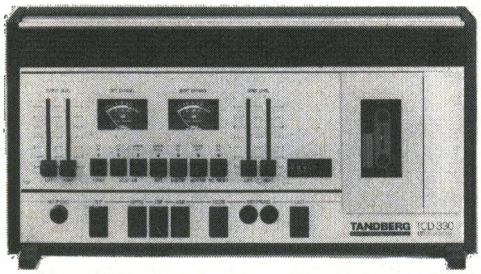
TANDBERG SOUNDS BETTER AT HARDMAN'S

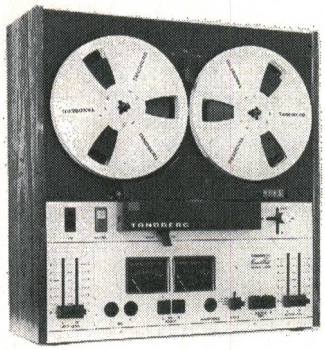


TCD 310 CASSETTE DECK *(illustrated above)*
List Price £210·00 **Hardman's P.O.A.**
This Tandberg's first cassette deck has set standards which other manufacturers have still to attain. The three motor dual capstan tape drive is long recognised in reel–reel machines as being the most advanced system of tape transport. By incorporating it in the TCD 310, together with the DOLBY noise reduction system, Tandberg have produced a device of cassette convenience with true reel–reel performance.

10XD 10½ inch TAPE DECK List Price £695·00 **Hardman's P.O.A.**
This professional standard reel–reel tape deck confirms Tandberg's leading position in the Hi-Fi Market based on over 40 years' experience of advanced electronics. The 10XD has a maximum spool size of 10½ inches and tape speeds of 15, 7½ and 3¾ inches per second. Three motor-tape transport and four heads employed in Tandberg's unique Crossfield recording technique are combined with a DOLBY system and servo-logic controls in an exceptionally versatile tape recorder of truly remarkable performance.

TCD 330 CASSETTE DECK *(illustrated below)* List Price £399·00
Hardman's P.O.A.
Tandberg have long been recognised as world leaders in tape recorder technology and with this latest cassette deck have incorporated every design feature required of a world-beating machine. Though based on the TCD 310, the TCD 330 features three heads for off-tape monitoring, together with a record head azimuth alignment control to enable the deck to be optimised for any cassette. A dual DOLBY system enables full use to be made of the three heads and the servo-logic controls make it a pleasure to operate this superb machine.





3541X 7 inch TAPE DECK
(illustrated above) List Price £229·00
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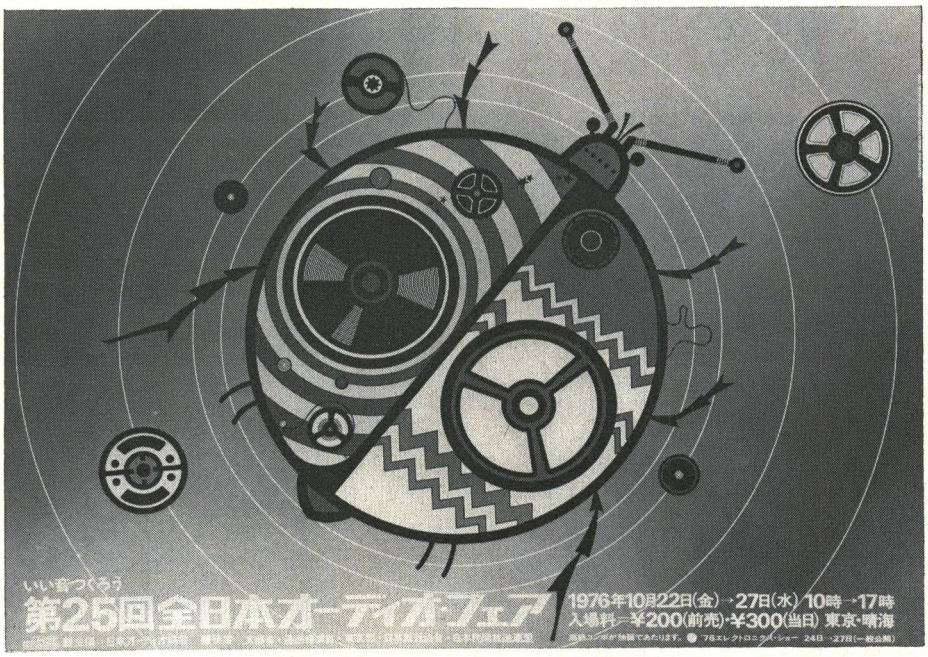
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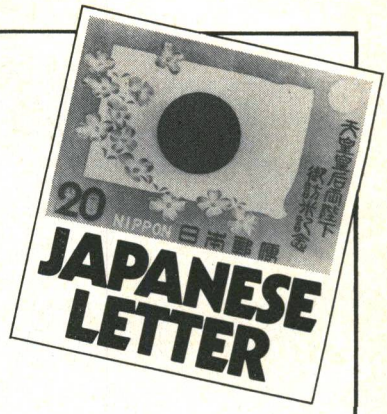
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Hi-Fi in the Rising Sun





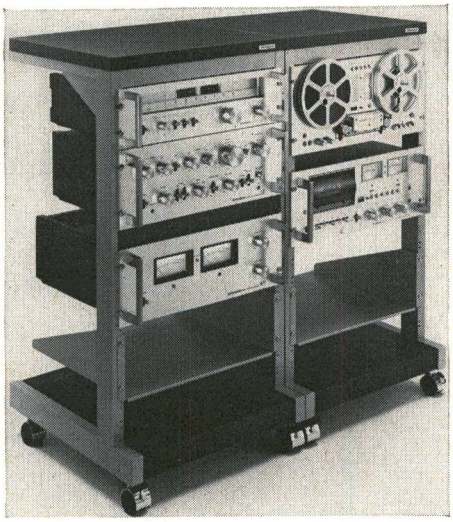
Paul Messenger gives his impressions of Japan and the 1976 Tokyo Audio Fair

WHEN examining the windows of any British hi-fi shop, it is obvious that the Japanese manufacturers are the greatest rivals to our domestic manufacturers in nearly every field. The opportunity to visit Japan, courtesy of Pioneer, examine some of the aspects of Japanese hi-fi and manufacturing, and also visit the 25th annual hi-fi show was obviously a journalist's dream and enables me to report the details of new product developments whilst formulating certain hypotheses and gaining certain insights into the Japanese way of audio. Whilst philosophising on the latter is to me most interesting, it is naturally personal and somewhat superficial, being based on a very short visit; accordingly, I shall leave that until I have coped with the plethora of panacea to the technologically addicted at the show.

The opening (restricted) day was quiet and gentle, the hi-fi equipment being exhibited in three halls which perhaps totalled the area of Olympia. The major manufacturers, including some names unknown in England, were concentrated in purpose-built stands in the main hall, the smaller manufacturers and distributors were concentrated in open-ended booths along a long corridor (the second hall), whilst the third hall seemed to be in occasional use for lecture, recording and seminar work, consisting of various rooms of different sizes. The language barrier made it difficult to ascertain exactly what was going on here, although the initials PCM (on professional tape recorders) and NHK (the Japanese broadcasting service) were noted.

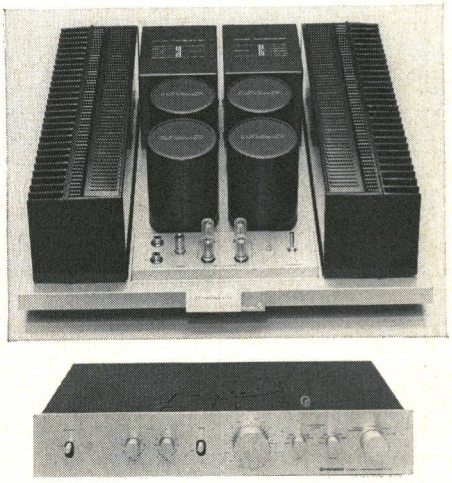
The second (public) day was bedlam, and coincided with the opening of the Consumer Electronics and Electronic Components shows opening across the road. All three shows drew impressively large crowds, the Japanese obviously being electronically obsessed.

Beginning with mine hosts Pioneer: the policy of this company, the largest hi-fi producer of all, is to treat the market as various different 'minority requirements' and produce complete and comprehensive ranges to satisfy every market requirement.



'System components' rack mounting by Pioneer. Note low profile reel-to-reel tape recorder on right and SPEC1/2 pre/power amps on left

The Japanese market can be conveniently considered in four categories: the '**compact**' which is comparable to our music centres—whilst visiting a factory I saw some very attractive aluminium-look music centres intended for the European market being soak-tested. The '**console**' type—these have separate loudspeakers but are an obvious descendant of high quality stereograms. '**System components**' which consist of furniture and racks specifically for mounting unified ranges of equipment vertically—and hence are progenitors of the front-loading cassette deck. Pioneer have just produced the RT 701 'low profile' 3 motor, 3 head open-reel tape deck which can be seen compactly mounted in a 'system component' rack. Perhaps the only example of this system familiar to British readers is the Nakamichi Recording Director Series, reviewed Nov '76. Finally, and not insignificantly, there is the '**hi-fi components**' market which stretches into the realm of the super (expensive) fi. New items of interest here included a new



Pioneer 20 series power-amp and pre-amp

Exclusive series (M4) power amp in class-A mode, and a low profile '20 series', which included electronic crossover, programme selector, a pre-amp with no tone controls (shades of Naim and Levinson) and variable capacitance/impedance cartridge loading, plus a 30W+30W class-A power-amp.

The main features of the Technics stand were Elcaset (see HFN/RR July '76) and a new reel-to-reel tape machine which featured an elegant closed loop capstan system and a myriad of 'user-serviceable' presets on the

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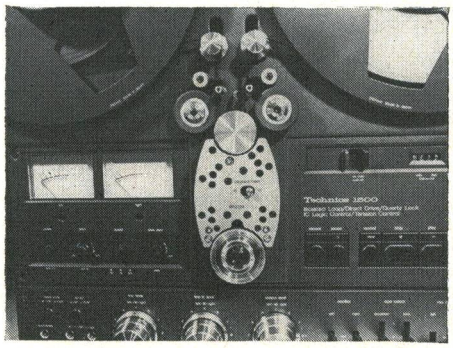
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head block. In addition the exotic dark brown 9000 series pre-amps, power amps, equalisers, etc, have not been idle recently: a veritable pride of progeny, half the height and cost but of similar width and appearance were being proudly displayed beside their parents.



Closed loop system with complex head block on Technics reel-to-reel recorder

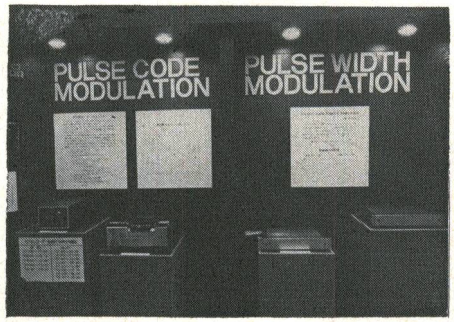
Lower cost direct drive turntables seem to be appearing on the Japanese market. The Denon was marketed as a very high priced model in Britain recently and there is now a version which sells in Japan for around £70. JVC were showing a superb but expensive quartz controlled device at Harrogate, and this also has a baby brother at less than £100 (in Japan). In addition to the turntables, Denon produce a very full range of equipment, but as far as I am aware only the very high quality moving-coil pickups are available in England. A Denon demonstration record of western classical music recorded with PCM techniques is, in places, one of the most outstanding recordings and pressings I have ever heard, and perhaps bodes well for the future of this approach.

In fact there are numerous Japanese manufacturers of some considerable size whose products are virtually unknown in Britain. Names like Onkyo, Diatone, Lo-D and NEC all appear to produce comprehensive ranges of equipment that cover the complete market.

Sony as ever are in the forefront of transistor technology and were proudly displaying two particularly interesting exhibits. A pulse code modulation audio tape recorder adapter for a videotape deck was one, and gives an S/N ratio of 85dB and harmonic distortion as low as 0·03%. The frequency response is claimed to be within ±0·25 dB from DC to 20 kHz. The adapter records 32-bit signals, 12 for each channel with 8 kept to correct for drop-outs (which naturally can be serious in a digital system). The audio signal is recorded on the television lines at 1,764 megabits per second, leaving the normal VTR audio channels free for other purposes.

The second item was a class-D pulse width modulation amplifier (PWM). Readers of long standing may care to refer to a three part article July–Sept. 1965 describing this principle in detail (although at this time the limitation lay in the quality of available semiconductors).

Yamaha's interests extend considerably into the fields of musical instruments and mixers. It was no surprise therefore to find

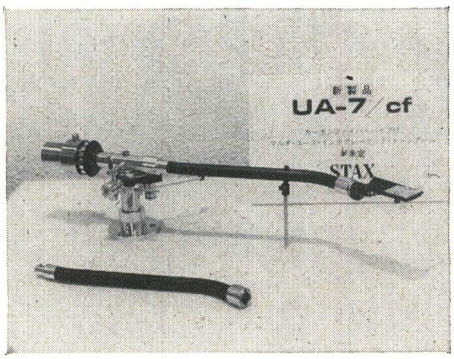


Sony digitalisation

live music being played, mixed and sent to a series of cassette recorders, where enthusiasts could make their own recordings, a very popular attraction.

The Lux Corporation were showing the usual range of equipment available in England, but perhaps of greater interest was the large range of valve amplifiers on display. Valve amps are certainly popular in Japan amongst many serious enthusiasts and several manufacturers are involved, Lux being the largest. I was nonetheless surprised to discover that they comprise some 20% of the Company's amplifier production and that the great majority are sold in kit form.

Another interesting company involved in valve amplifier production is the Onlife Corporation, with a full range of beautifully finished pre-amps and power amps in addition to the cartridges, the Dynavector arm, and the big and beautiful Klipschorns and Lowthers which they import. The latest research from this company has been directed at soundproofing rooms; it was notable that this was one of the few stands which were not imposing considerable second-hand sounds on the surroundings. In view of the high population density and fairly small, almost flimsy houses in Japan, and also the high power amplifiers and horn loaded loudspeakers, I should imagine that any research in this direction is eminently worthwhile.



Stax carbon fibre arm tube

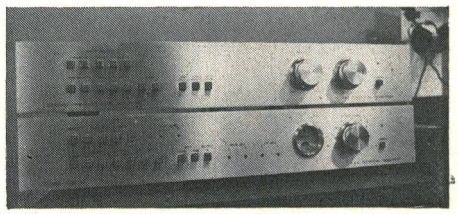
Another of the smaller companies that were particularly interesting was Stax. In addition to the SR44 electret headphones which were recently announced, there was a high quality amplifier specifically designed for headphones, a large and imposing 150 w.p.c. class-A d.c. power amplifier, carbon fibre versions of the excellent pickup arm, and a headset with the transducers set at an angle and away from the head to enable a rather more convincing sound-stage than normally available with headphones to be obtained from conventional recordings.



Stax SR-Σ

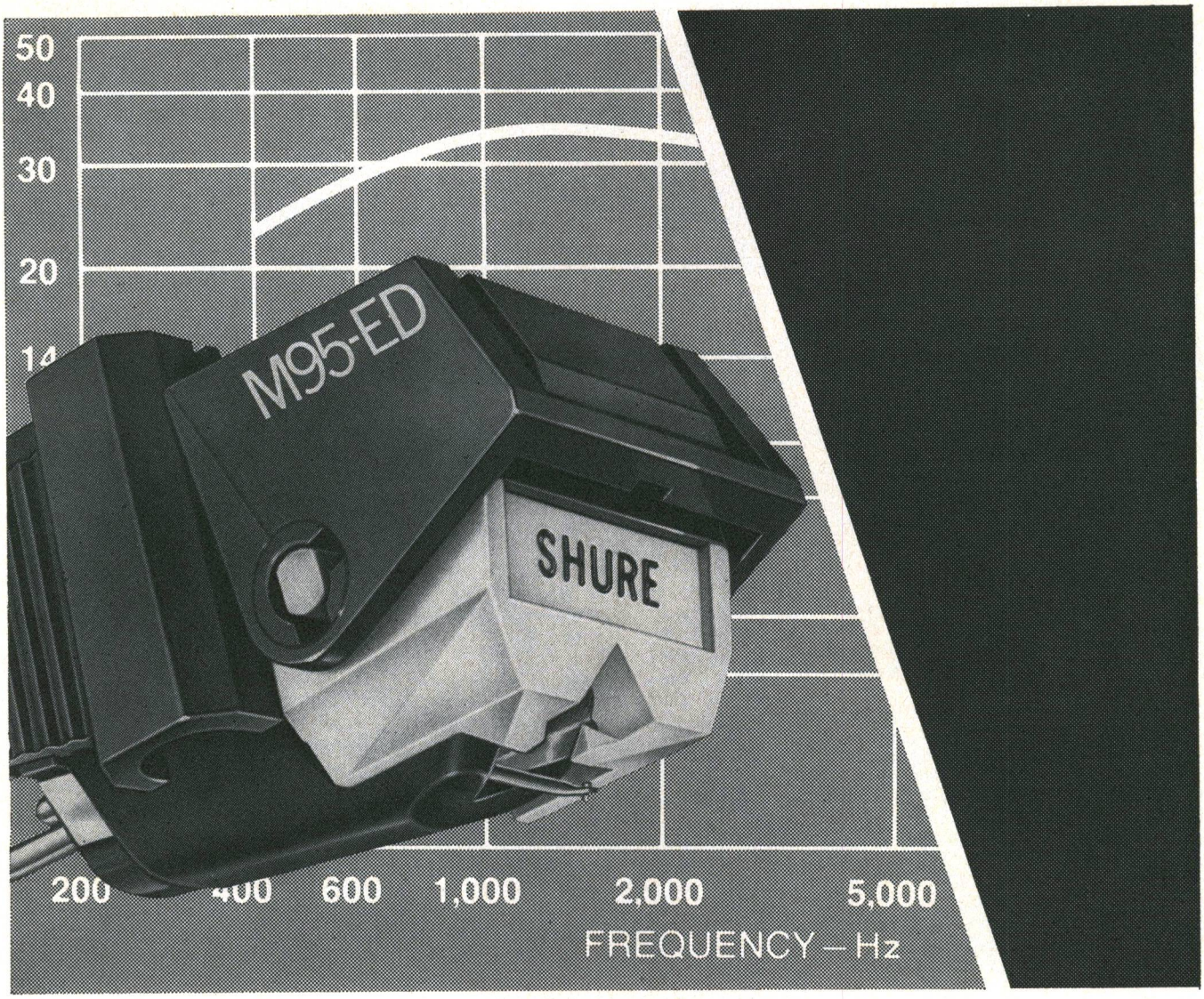
Specialised tape manufacturers were represented and perhaps dominated by Fuji, Maxell and TDK; if the evidence of my sample of the new UDXL II is typical, tape technology in Japan continues to improve at an impressive rate. Teac are best known for their tape recorders, a specialisation which extends into the professional market. Notable amongst their products was their commitment to the dbx noise reduction system. Although these were not actually built into the machines, several dbx boxes were stylistically (and presumably electronically) matched to the various models. The new Teac Elcaset, with matching dbx, was to my eyes easily the most attractive looking example of this tape format I have seen.

In addition to the Japanese manufacturers there were numerous foreign brands, some under their own aegis and some through distributors. American firms included Electro-Voice, Marantz, JBL, AR and Harman-Kardon, while Europeans included B&O and Ortofon. There was a good selection of English manufacturers represented, although relatively speaking prices seemed high; these included BSR/ADC, Tannoy (including the large horns), Quad, Celestion, SME, Spendor and Lentek.

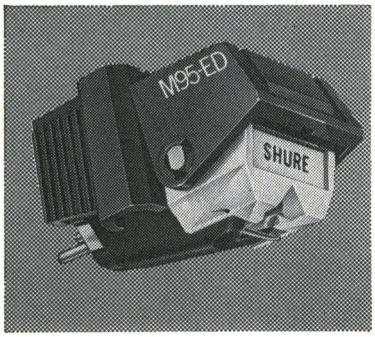


Two pre-amps from A & E Technical Research

In some ways the small manufacturers were the most interesting part of the show, and gave a good indication of the almost obsessive fervour with which the Japanese are involved in audio, particularly at the top end of the market. There were numerous specialist manufacturers producing unusual accessories (such as a complete range of headshells) and interesting items of equipment like the SAEC double knife-edge pickup arm (see News p. 51). A fine looking range of amplifiers were being exhibited by a company known as A & E



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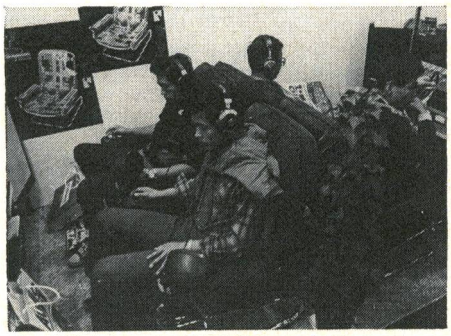
Shure now introduces a superb, moderately priced pick-up cartridge with a performance second only to the renowned V-15 Type III. The technologically advanced electromagnetic structure with a newly designed pole-piece virtually eliminates hysteresis loss. The frequency response from 20 to 20,000 Hz remains essentially flat. Operating at extremely light tracking forces of between ¾ and 1½ grams, the exceptional trackability of the M95ED enables it to trace the very high recorded velocities encountered on many modern recordings with the result that in addition to providing faithful reproduction of the recorded sound, stylus and record wear are reduced to minimum proportions. The M95ED: A notable addition to the Shure range with a performance never before available at such a competitive price.

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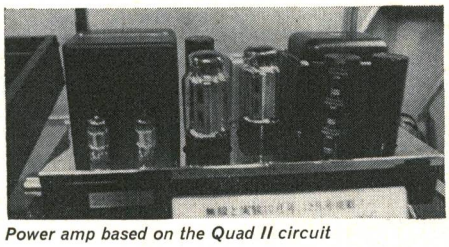
Technical Research, and I suspect that these designs may have influenced the 'low-profile' new models from the larger manufacturers. The range comprises two pre-amps, two power-amps and an active filter unit; prices and specifications were both high and styling restrained. The power amps were class-A devices with a flat frequency response from DC to 300 kHz. The pre-amps were also no-compromise devices with pickup impedance matching rather than tone controls, and exceptional overload levels.

Another interesting device which was experienced was the 'Bodysonic' audio chair (described by Adrian Hope in Audio Patents p. 81). This certainly gave an impressive illusion of deep bass when used with headphones, and the alternative of small fixed position monitor loudspeakers attached to the arms of the chair, with the latter handling the bass, offers interesting possibilities for high quality personal listening.



The audio hot-seat with great concentration

The hobbyist home constructor market is obviously large in Japan and included many interesting designs particularly in amplifiers and loudspeakers. Books and magazines such as Stereo-Technic contained considerable information for the enthusiast, including an amplifier based on the Quad II circuit, using Lux transformers and Telefunken EL156 valves instead of KT66s to produce a 65W output! The appeal of valve amplifiers was elegantly described to me as an analogy to cooking and eating steak with and without seasoning: transistor amplifiers were now capable of very accurate fidelity, but valve amplifiers provided a degree of 'seasoning' that could be musically very satisfying.



Power amp based on the Quad II circuit

Two aspects of Japanese audio immediately induce speculation: the economic strength and size of the industry, and the differences in aural taste (particularly in loudspeakers). Dealing with the industry first, a factor of prime importance is that the Japanese as a nation are hooked on technology, and the level of market penetration in hi-fi equipment (of the order of 50%) is far higher than in Britain; the population is double that of the UK, and the sales structure is biased towards expensive equipment. In addition to considerably outnumbering the British hi-fi listener, the Japanese also outspends him by a similar margin. In fact it is a good approximation to consider the three main hi-fi markets (Japan, Western Europe, USA) as being roughly equal in size, and this is an indication of the strength of the home market from which the Japanese work.

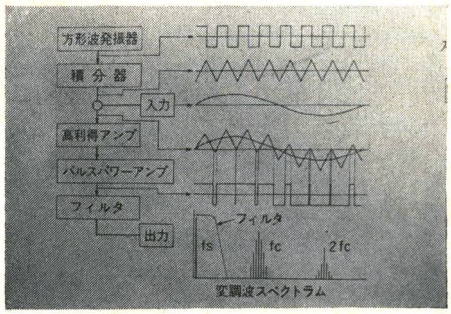
The combination of a steady high rate of growth over many years to a high level of market penetration, and an economic climate of planned growth rather than stop/go has obviously attracted considerable investment into the industry. However, at what point will the home market become saturated, and in that event what will happen to the spare productive capacity? Obviously the Japanese hi-fi industry will have to maintain its competitiveness in world markets and rely on the potential growth of overseas markets, the brightest hopes being presumably the enormous untapped market-place of the underdeveloped countries (which in numerical terms comprise 75% of the available consumers) and the European market which has greater growth potential than the Japanese and US.

Undoubtedly the fiscal policies of their government have enabled the Japanese to build a strong growth base. This was reflected by the optimism of the simultaneous and symbiotic Electronics Components exhibition which is obviously in a very healthy state and also energetically exporting.

It was gratifying to discover that the towering industrial idol did in fact have traces of clay around the feet. Whilst Japanese expertise in marketing and production engineering is first-class, I was left with the impression that their research was in no way superior. For example, I attended a speaker evaluation session in a listening room which was reminiscent of a debating chamber, and where the only programme source was a collection of dubious discs and an unknown and unorthodox cartridge! Considering the economic strength of the industry, the amount of genuine innovation is surprisingly small; perhaps much of the effort goes into development rather than research work.

It is intriguing to speculate on the future of the Japanese Audio industry, as there must obviously be some fear of home market saturation, particularly as the penetration and per capita expenditure is so much higher than elsewhere in the world (which in turn must be the very reason for its success). Despite considerable superficial western influence, the culture is obviously fundamentally alien to western understanding; no examination of one's own prejudices and motivations can even attempt to predict future consumer trends. Currently it is true to say that there seems to be a strong upgrading movement which is keeping the market buoyant, as evidenced by the numerous small firms catering for highly esoteric tastes.

How then does the Japanese taste differ



Son's PWM principle explained!—A Japanese puzzle for the New Year

from the British? Horn loudspeakers are much in evidence and there were very few, if any, Bextrene-cone loudspeakers. I have always liked horns for their transient attack, but have found coloration and response anomalies tend to be exaggerated (but see Subjective Sounds p. 63); I suspect that to Japanese ears the smoothness of British loudspeakers may be less significant than the attack of their own.

Another area which suggests different subjective perception is in pickup arm design. British engineers have persistently criticised Japanese arms of being too heavy and with too great an effective mass at the headshell. The pickup arm catch-phrase in Japan is not 'effective mass' but 'spurious arm resonances' and arms are in general more massively engineered to prevent unwanted excitation from, and effect rigid mounting of, the cartridge. One manufacturer was proudly displaying his 'perfect headshell' with the 'extremely low mass' of 7·5 gm—roughly the total effective mass of lightweight British arms!

The popularity of moving-coil cartridges and ultra rigid arms could also perhaps reflect a strong emphasis on preserving transient information at the expense of other factors. The bandwidth of Japanese amplifiers is often criticised for unnecessary high frequency extension with attendant risk of r.f. problems, but this could also be the result of the same thinking.

Although I may have misinterpreted this emphasis on transients, one of the most enjoyable experiences of the trip was a recording session of traditional Japanese music arranged by Pioneer. The instruments were very percussive, in particular the Samisen which is similar to a banjo, with three silk strings, a frame of hard wood and a sounding board of cat skin, played with a large ivory plectrum. The excellent 'master cassette' copy that we were given is truly remarkable for the quality of the transients, despite occasional slight clipping, and is certainly the most exciting cassette recording I have heard.

Whether or not these superficial impressions of my brief visit to the land of the rising receivers contain any validity, the experience was invaluable in putting flesh on my skeletal idea of Japanese audio—even if the flesh was not necessarily as attractive as the skeleton. The opportunity to meet journalists from Europe and Japan was likewise broadening and stimulating; national traits in audio are clearly distinguishable and significant, and insularity can breed complacency. ●

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FM Radio

Angus McKenzie

So much has been happening in the last few months in the quadraphonic field in broadcasting that I have tended to neglect some very fine concerts, relayed in stereo on Radio 3. On November 17th the Hungarian State Symphony, conducted by Ferencsik, gave a concert in the Royal Festival Hall. My wife and I were given tickets for seats in the front row, right in the centre of the Grand Tier, whilst my elder daughter taped the concert at home for me. The comparison between the sound I heard in the hall and the sound reproduced from the broadcast proved exceptionally interesting, and perhaps for the first time I can be absolutely specific with comments on the broadcasting and balancing techniques employed and the sounds produced.

I have usually sat in the main part of the hall, and up in the Grand Tier I had expected to hear slightly more reverberation, particularly from the assisted resonance equipment in the ceiling. However, the effect of this was not at all obvious and the direct sound always predominated, which is a compliment to the installation. Naturally the angular width was limited, but on the transmission it was clear that the entire sound throughout the broadcast was overwide, although probably fairly 'commercial'. The BBC employed two stereo microphones, one several feet behind the other, allowing them to add extra reverberation when required. Two additional microphones were placed to pick up the front of the violins, and the cellos and basses, respectively.

The orchestra included a massive string section with a magnificent violin department, producing what I can only describe as a most professional sound quality that one attributes to a great orchestra, but with the enthusiasm and vivacity that one only normally gets from a first-class youth orchestra. This comment is intended to be complimentary, for what came over so often was the brilliance, attack and musicianship that is so frequently lacking in many top-class orchestras. The broadcast clearly preserved the clear silky sheen of the violins in one of the most exciting upper string section sounds I have heard relayed from the hall. The upper register of the cellos and basses had plenty of attack, but in the lower regions the sound was frequently muddy on the transmission, but clear in the hall itself. The woodwind and brass were crystal sharp in the hall, but the woodwind were vague, distant and muddy in the broadcast, with the exception of a clear improvement in sound quality in the Kodaly *Peacock Variations*, which ended the main concert. Weber's *Abu Hassan* overture was given as an encore, but whilst in the hall it sparkled in climaxes and yet had a daintiness in some of the feathery string passages, the transmission sounded a little woolly and the back of the orchestra indistinct, particularly in the reproduction of the cymbals and woodwind.

The concert began with Mozart's 'Paris' Symphony, and whilst the sound was generally good on the broadcast, it was magnificent in the hall. Once again the clarity at the low frequency end was almost completely lost on the relay, whether I listened on headphones or on Yamaha 1000M loudspeakers, the latter being noted for their clarity across the audio range (and adopted by the Swedish Broadcasting System for monitoring). The symphony was transmitted with a sound quality that made the orchestra sound much larger than it was, thus taking away some of the delicacy in the middle and lower parts that was evident in the hall. The Ravel piano concerto, in which Dezso Ranki was the soloist, had a good balance between the piano and orchestra and we could not see any solo piano mike, the sound presumably being picked up on the main stereo pair. Strangely, the piano sounded a little boomy on the transmission, although the overall sound quality was clearly better than average, but again with too much reverberation for my taste. The second half began with Bartok's *Dance Suite* and my comments here, as to the broadcast quality, are virtually identical to those for the other works.

It was evident, particularly in the Kodaly and the encore, that an EMT plate was used to add some artificial reverberation to the sound, and at times after a die-away of a climax more reverberation was heard coming from the right than from the left channel. I am afraid that I found this ridiculous and I cannot agree that reverberation should be added in this way. I am now also opposed to the addition of a contribution from backward facing cardioids, since by comparison of the live sound with that of the broadcast, the muddying effect destroys so much clarity in the inner parts. Whilst the sound picked up from the main stereo pair is probably too close, the addition of a second stereo pair affects the bass end through low frequency cancellations and additions. I have frequently made stereo recordings in the hall myself, almost always with a single pair, and have found that by using cardioids with approximately 110° angle between them, and perhaps at least 8 ft further back, the sound is so much clearer and more open.

In the context of the microphone positions used by the BBC, it is evident that the contribution from their front stereo pair does not provide enough space and is also overwide; but surely the answer to the problem is to work further back, whilst modifying the microphones' directivity pattern to suit the increased distance. The height of the main coincident mike is very critical, since if it is too low the string section will in general be too predominant, whereas if it is too high the sound will lose the high frequency sheen of the string section. The addition of 'outriggers' to strengthen the contribution from the sides of the orchestra is reasonable and probably an advantage, although I have never found it necessary myself in the RFH. If, for some reason, artificial reverberation must be added, I suggest that there should be a time delay, obtained either from a high quality stereo tape loop or from a highly esoteric electronic delay between the direct sound and the sound sent to the reverberation device. This would permit the onset of reverberation to be a split-second after a transient has passed, thus allowing the ear to hear an unadulterated transient, but with an added bloom after it has passed. After all, this is what actually occurs in real life. If reverberation is added which contributes energy to the transient itself, the sound is obviously more confused. You might think that I am splitting hairs, but I must assure readers that I have experimented with tape loops taken in and out of a reverberation feed and the difference is fairly dramatic and always favours delayed reverberation.

To be fair, this relay was of better quality than average, so there is all the more reason one should be as critical as possible in what I hope will be taken by the BBC as constructive comment, and what must be also regarded as a matter of personal taste. My colleagues, however, agree with every word that I have written, although they did not have the advantage of being present at the concert.

Some rather slapdash editing has been heard over the last year or two. I heard one glorious example of this quite by accident at about 5.30 p.m. on November 11th on the John Dunn Show on BBC Radio 2. Somebody was being interviewed in a pre-recording, which was possibly made outside the BBC, and during the transmission the interviewee stopped talking, tutted and was interrupted by the studio manager over talk-back, who asked him to repeat the passage. An exasperated sigh was followed by some remarks and then by a repeat, after which the interview continued normally. It seems ridiculous that the interruption was not edited out: surely this tape should have been auditioned properly before transmission. I can well imagine some rather red faces in the continuity suite at the time.

Finally this month I would like to draw readers' attention to a most important paper on the BBC Matrix H system. Written by members of the BBC research department, the paper was included in the European Broadcasting Union Review—Technical No. 159 (October 1976).* Readers are referred to my comments in the November issue relating to BBC quadraphony, but I now hear that the BBC have developed their own Matrix H decoder and I hope we shall hear some more Matrix H transmissions soon.

** See Editorial Comment on page 47 for some remarks on this paper.*—**Ed.**



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Subjective Sounds

Paul Messenger

THIS column attempts to examine subjectively the performance of items of equipment in relation to a reference system. However, the constant question in my mind is: How good is the reference system? Consequently opportunities to listen to alternative systems are frequently taken.

In this country, for example, I was much impressed by John Farlowe's (Exposure Electronics) system of Linn Sondek/Grace/Denon 103S, Dunlap-Clarke, Klark-Technik and Dayton Wright XG8 IIIs. The latter are full-range gas-filled electrostatics with excellent transparency and attack plus prodigious loudness capability. However, in Japan recently I had the opportunity to hear a system which was in many ways highly unorthodox and yet produced an imitation of music that was to my ears an order better than any hi-fi I had heard before. Fortunately we had a high-quality musical test record in common and playing this on my return left me with a feeling of some dissatisfaction with my own system.

In view of some of the peculiarities of Mr Tanaka's system and yet the astonishingly good results, I have decided to devote this column to describing it in as much detail as I could elicit through the language barrier and remember through the jet lag. Those who consider the quest for super-fi to be ludicrous and obsessional should not read on.

There were several cartridges, but the one in regular use was the Denon 103S in conjunction with an obsolete version of the transformer. Another Japanese moving-coil pickup that was used was the Satin, a name completely unknown in the UK. The pickup arm was the familiar Stax with its interchangeable arm tube, and this was indeed changed according to the cartridge being used. Bias compensation was applied by a small weight on long string resting against the inside of the arm tube.

The turntable started life as a TEAC direct drive model, but had been modified and was now driven by a belt around the rim. Various materials had been tried for the turntable mat and in current use was a disc of 'Plasticine' rolled thin and covered with a plastic film—a process which takes a few hours but which I was assured was well worthwhile. The lead out wires from the pickup arm were from Neumann microphone cable which contains very pure copper.

Three pre-amps available were in use including the venerable Quad 22, an exotic Japanese valve preamp and a small transistorised RIAA-only pre-amp with battery supply. These then fed a Sony active filter unit which in turn fed the power amps. As the active filter unit was used it was necessary to use three stereo power amps or equivalent.

The power amps were something of a hybrid, using a direct-coupled class-A stereo transistor amp for the bass and four mono triode-based valve amps with output transformers by Partridge of Chessington.

An Otari tape deck was used to replay some master tapes. This semi-professional machine has separate amplifier and transport deck and produced excellent results, although the mechanical noise level was a little high for a domestic machine.

The loudspeakers were called Onken, but astounded me as they are a horn system with virtually none of the colorations I have usually found in such. The bass enclosure consists of sand filled panels and contains a low mass 38 cm diam. cone with powerful motor, horn loaded from the rear. The mid-range 'squawker' uses a very powerful magnet and titanium diaphragm feeding a carefully adjusted flared horn, again of sand-filled panels. Despite careful listening on such as female vocal, the coloration was as low as I have ever heard.

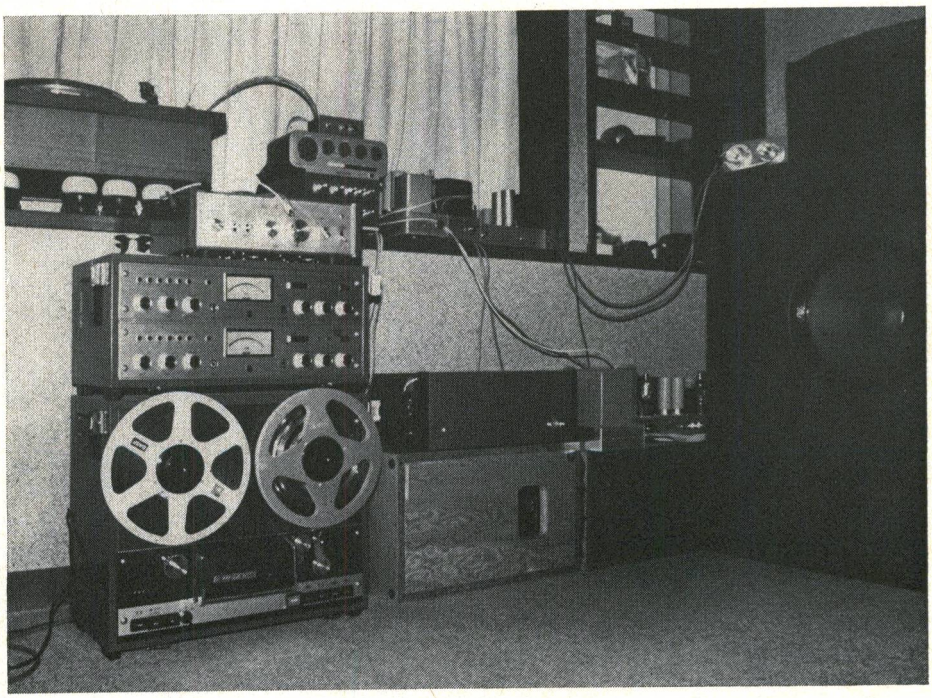
The tweeter unit also had a titanium diaphragm in a machined metal horn, again with a generous magnet. In fact, alternative but similar tweeters named 'Kato' were being used (two in parallel for each channel at a cost of £400 each) and these were extraordinarily detailed and delicate, although the cheaper Onken tweeter was very good.

The owner attached considerable importance to the choice of connecting cables between each item of equipment. I was shown the effect of substituting three similar length patch leads between the pre-amp and active filter units. These three leads, I was assured, measured very similarly by conventional tests, being low capacitance examples from Technics and Pioneer, and an American cable with gold-plated plugs. Strangely, with identical volume settings, the American lead seemed to produce some 2dB more signal. It was suggested to me that perhaps some signal is lost through edge effects in the wire itself, resulting in a loss of information. By and large the criteria for 'fine-tuning' the system was by making substitutions to minimise this loss of information. I was also told that some items of equipment (for example the Onken speakers) are particularly sensitive to small changes.

Three different kinds of wire were used to link the different loudspeaker units to their power-amps. The bass units were connected by Lukas cable which separates the signal and return wires by about 1 cm to reduce capacitance, and has very low specific resistance to preserve loudspeaker damping. The squawkers were connected by flat woven wire and again the 'positive' and 'negative' were separated (some commercial examples of this type of wire interleave the opposite-sense sections). The wires to the tweeters were a bunch of fairly thick enamelled copper wires and only the ends were soldered together, thereby preserving insulation between the strands along the length.

This would seem to open up certain avenues for exploration. The difficulty is likely to result from the inevitably subjective nature of any experiments. Any attempt to introduce switching for A/B testing will disturb the 'tuning' of the system. As yet the only methodology appears to be careful use of the ears, and an attempt to avoid loss of information.

Whether or not we are entering an era of hi-fi mysticism or lunacy, this system was an order better than anything I had heard before. Perhaps there is a point beyond which 'system optimisation' or 'fine tuning' can produce significant gains, or possibly these techniques could effect subjective improvement in any system. Is there another area of hi-fi to be opened up?



An overall view of Mr. Tanaka's system

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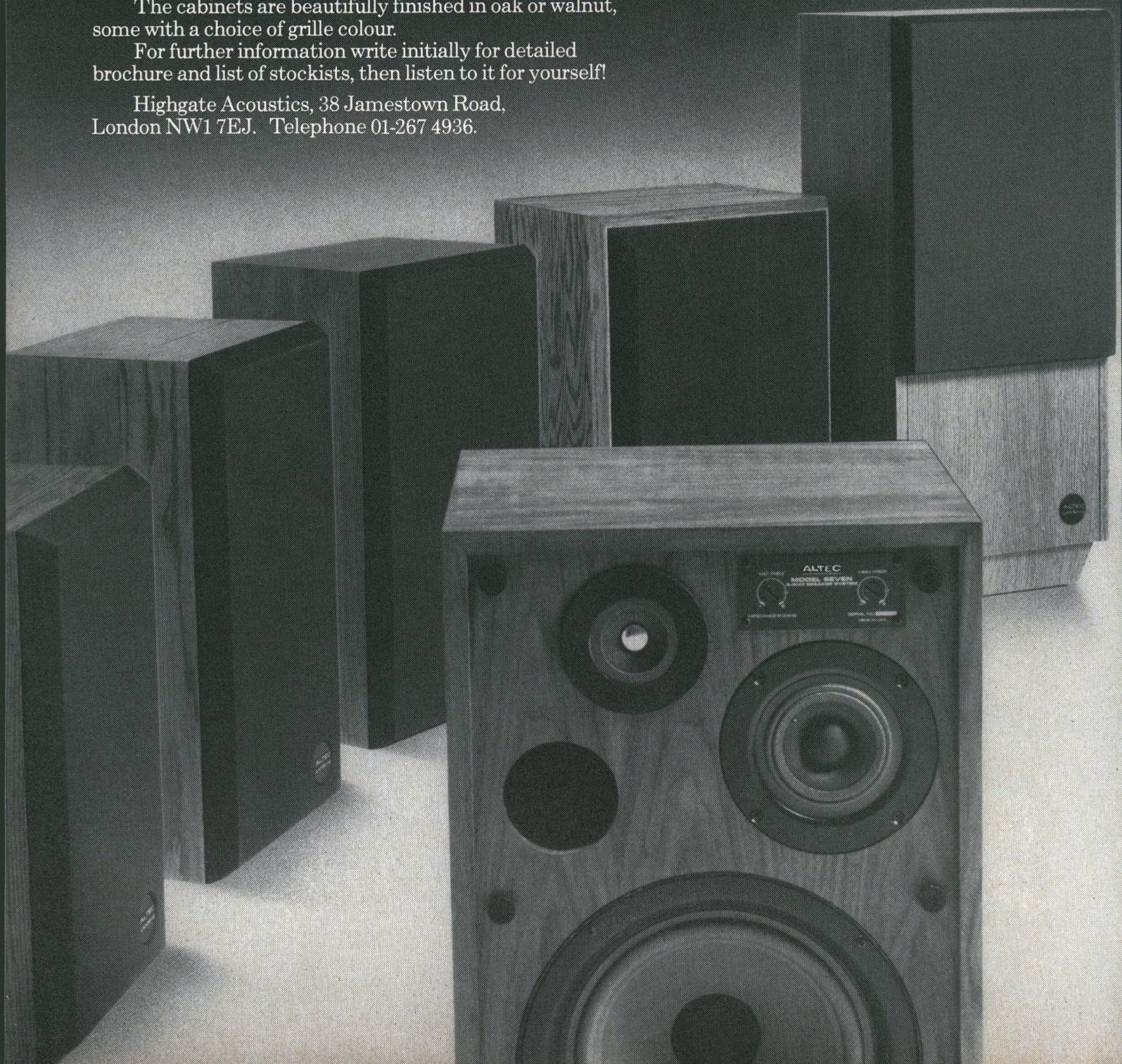
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INTERFACE

3·Amplifier to Loudspeaker

Following last month's article by Gordon King, Angus Mckenzie approaches this interconnection from a different angle

IF you measure the DC resistance of a loudspeaker system across its input terminals you may well find that it is open-circuit, in which case the manufacturer has incorporated a very high value capacitor on the input to prevent the bass unit being affected by DC offsets, or by switch-on and switch-off transients from the amplifier. More probably, you might see a resistance of 5–8 ohms or so, normally representing the DC resistance of the bass voice-coil, together with that of any inductors in series with it. If, however, you measure the *impedance* of the loudspeaker at different audio frequencies you will find highly significant variations across the audio spectrum. At any specified frequency a complete loudspeaker system will have a resistive component and a capacitive or inductive one, the latter being known as the 'imaginary' term and contributing a reactive characteristic.

Usually, speaker impedance is measured by driving the system through a high value series resistor from a constant voltage source, and plotting the voltage across the speaker terminals; the lower the voltage measured, the lower the impedance at the frequency of measurement. However, such a measurement gives only what is termed the modulus of impedance, *i.e.* the total impedance in ohms of the system, making no allowance for phase-shift introduced by reactive elements, and furthermore not giving indication of real and imaginary components in an equivalent network. A more precise, but very lengthy method of measurement entails the use of an audio impedance bridge such as a Wayne Kerr model B642. This allows measurements to be taken at almost any desired frequency, and gives, after a brief calculation, resistive and reactive components separately in terms of a parallel network.

At frequencies where the loudspeaker is not purely resistive there will be a lag or lead of current with respect to voltage, and this means that the amplifier may be required to deliver voltage at low current, and a moment later current at a low voltage, rather than the current always being proportional to the voltage, as it would be when a pure resistance is driven. When the current drawn is not precisely in phase with the voltage, a phase-shift can be measured, and this is comparatively simple to pen-chart fairly quickly across the frequency range of the loudspeaker. Similarly, the impedance modulus can be measured with a pen-chart, and by examining the two it becomes possible to see at what frequencies problems might be experienced with amplifiers that cannot give high voltage and high current at the same time, or alternatively drive a highly reactive load satisfactorily.

Some speakers, such as the Quad electrostatic, actually have different impedances at the same frequency at different input levels: extremely low values of impedance for low level input signals, but rather higher ones at higher levels. It is the exceptionally low impedance of such speakers at lower levels which can cause instability, etc., in some types of amplifier. In such cases a series resistor of 2 ohms or so can be inserted into the circuit to increase the minimum impedance of the system at low levels and thus stop instability.

A typical '8-ohm' speaker system can have a minimum modulus of impedance of 5 ohms or so—but usually not less than about 6 ohms —and a maximum of 25 ohms or more. When interconnecting such speakers with amplifiers, points on the impedance curve above 8 ohms can be more-or-less ignored; they are purely indicators to an engineer of points in the design. At a frequency where the impedance is 25 ohms, for example, the efficiency is much greater than the average efficiency of the speaker, for it will not require so much current from the amplifier. Points below 8 ohms will require a much higher current. As an amplifier is technically a constant voltage source, it should therefore supply whatever current is necessary, in phase or with phase-shift, up to the full requirements of the speaker. Unfortunately, herein lies the snag in many modern amplifier designs, for a loudspeaker designed to be flat in response for a constant voltage input will thus require much more power to drive it at some (low impedance) frequencies than at others.

Modern speakers tend to be much less efficient than older types, and although there are exceptions, most models with particularly low coloration (e.g. KEF models 103/104, Chartwell LS3/5A and Spendor BC1) tend to be even less sensitive than average. Thus many a loudspeaker system of yesteryear might give adequate room volume when fed from an amplifier capable of giving 15 W per channel, whereas a modern insensitive system could require 80 W or more per channel to achieve the same volume. If one bears in mind the power required to drive a speaker at frequencies where it is 8 ohms, one might find that 80 W is adequate to take care of a loud transient. But the same voltage required at another frequency where the real part of the impedance is 4 ohms will require double the power capability, for the current consumption will be doubled. Some amplifier designs cannot even give as much power into 4 ohms as they do into 8, let alone more! Thus an amplifier rated at 100 W into 8 ohms and 50 W into 4 ohms, becomes the equivalent of only a 25 W amplifier capable of giving the same voltage into 4 ohms and 8 ohms. To accommodate certain types of transient without distortion, the amplifier claimed as a 100 W model must have its output reduced so that it will not be required to give the extra current. It would seem that too many amplifiers are designed to work admirably into 8 ohm resistors, perhaps even with capacitors across them, but all too few are designed with subjective listening tests in mind.

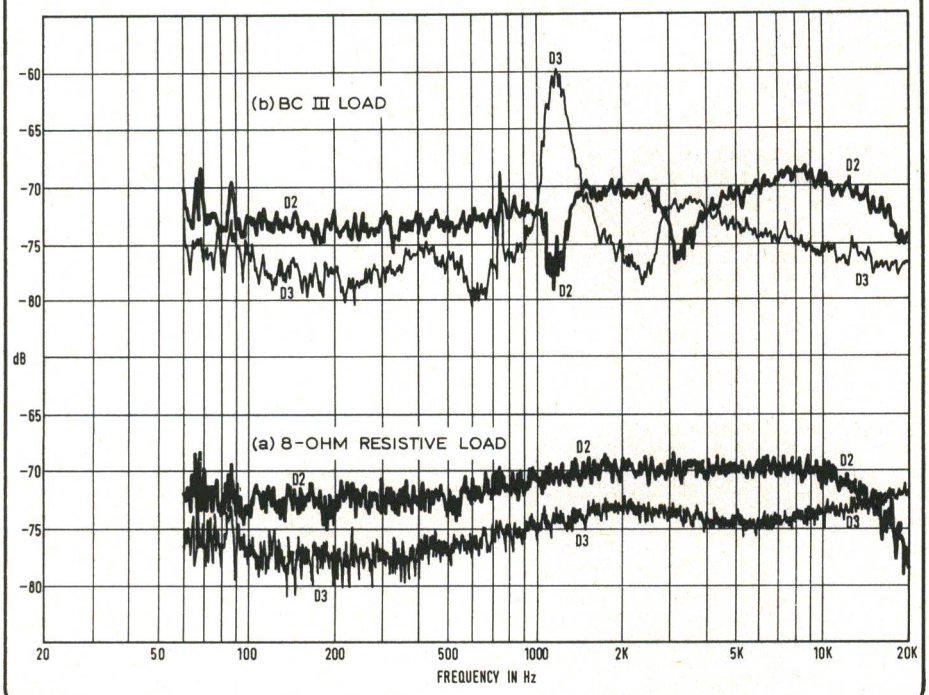
An amplifier's power output capability can be specified as the maximum continuous average power available into a specified load for a given percentage of distortion. Alternatively it can have a peak music power rating which is concerned with its capability of supplying power for a relatively short space of time and before any protection circuitry turns it off. Fortunately for us, almost all music is largely transient in nature, so we should all be more interested in transient power capability, whilst bearing in mind average power for coping with long pedal organ notes, electronic music, etc. When my colleagues and I recently examined 85 different receivers, we measured transient power as well as max. continuous average power, and found that in general many amplifiers could give 10 or 20% more power for a short space of time without any trouble. It is obviously unreasonable to expect modestly priced amplifiers to give twice the continuous power into 4 ohms as they can give into 8 ohms; but possibly what is more to the point is that the amplifier should definitely be capable—if it is to be a good one —of giving double power into 4 ohms *on transients*, and designers should look at current overload protection in terms of time, so that short transients could be allowed through, while continuous high power would blow a safety cut-out.

In measuring the sensitivities of many designs of loudspeakers in the summer of 1976, I was amazed to find that some required 16 times more power than others to obtain the same room volume. A few were more efficient still, but were not measured because their subjective quality was poor. Thus while 5 W was adequate for one particular speaker, another required 80 W, so your choice of amplifier with respect to power rating must be governed by the type of loudspeakers to be employed.* It is perhaps surprising that 80 W into a pair of very inefficient speakers is not deafening, whereas 20 W into a very efficient pair can blow you out of the room. I suggest that for most applications an amplifier capable of 50 W per channel should be adequate, but do not forget that this power could well damage some types of speaker that are only designed for use at low powers. Remember too that only very rarely will your amplifier be required to give even a quarter of its maximum output, for apart from very short transients the power will generally be in milliwatts rather than watts.

Surprisingly, cases have been known where

*See *Hi-Fi Choice Loudspeakers* (Aquarias Books Ltd)

FIG. 1 POWER AMPLIFIER 'X', ½ POWER IM DISTORTION INTO TWO LOADS



an amplifier of too *low* a power capability has caused damage to loudspeakers, and this can occur if the amplifier is continually driven into clipping (and thus serious distortion) in which case the high frequency energy produced as harmonics can damage tweeters. A higher power amplifier would not generate as much HF distortion, and thus less energy might be applied to the tweeters. Furthermore, some poor amplifiers, when driven into clipping, can go unstable, and either produce bursts of very high frequency oscillation, or nasty DC offsets, which again will damage various units. For these reasons, never allow your amplifier to run continuously into clipping, for you may well damage your speakers as well as making a pretty horrible noise.

Turning now to interconnections, amplifiers can be provided with a variety of different types of output socket, and here I must confirm my intense dislike for the DIN socket, which in any case is not suitable for high power outputs because of heating problems in the contacts. Banana sockets I find extremely convenient, but since these encourage the use of banana plugs on loudspeaker leads they are being discouraged internationally, because the same size of pin happens to fit perfectly into a standard European mains socket! Thus various different forms of terminal such as clamp type levers have been introduced.

Always make sure that your loudspeaker wire is connected firmly, and right around the screw-on terminal, so that the contact is as firm and of as large an area as possible. The choice of loudspeaker lead can be important, particularly if you wish to preserve an amplifier's full damping factor. An 8-ohm system that falls a little in impedance should be connected with wire having a total resistance in both live and neutral of not more than about half an ohm. This will automatically degrade the effective damping factor to 16, but this should be perfectly acceptable. Wire of substantially higher total resistance will not only degrade the damping factor, but can actually alter the loudspeaker's frequency response, for the cable will act as an attenuator having different degrees of attenuation as the loudspeaker's impedance varies. When the latter is high the attenuation will be very low, but when the impedance is very low such attenuation can produce 2 dB or so drop in output.

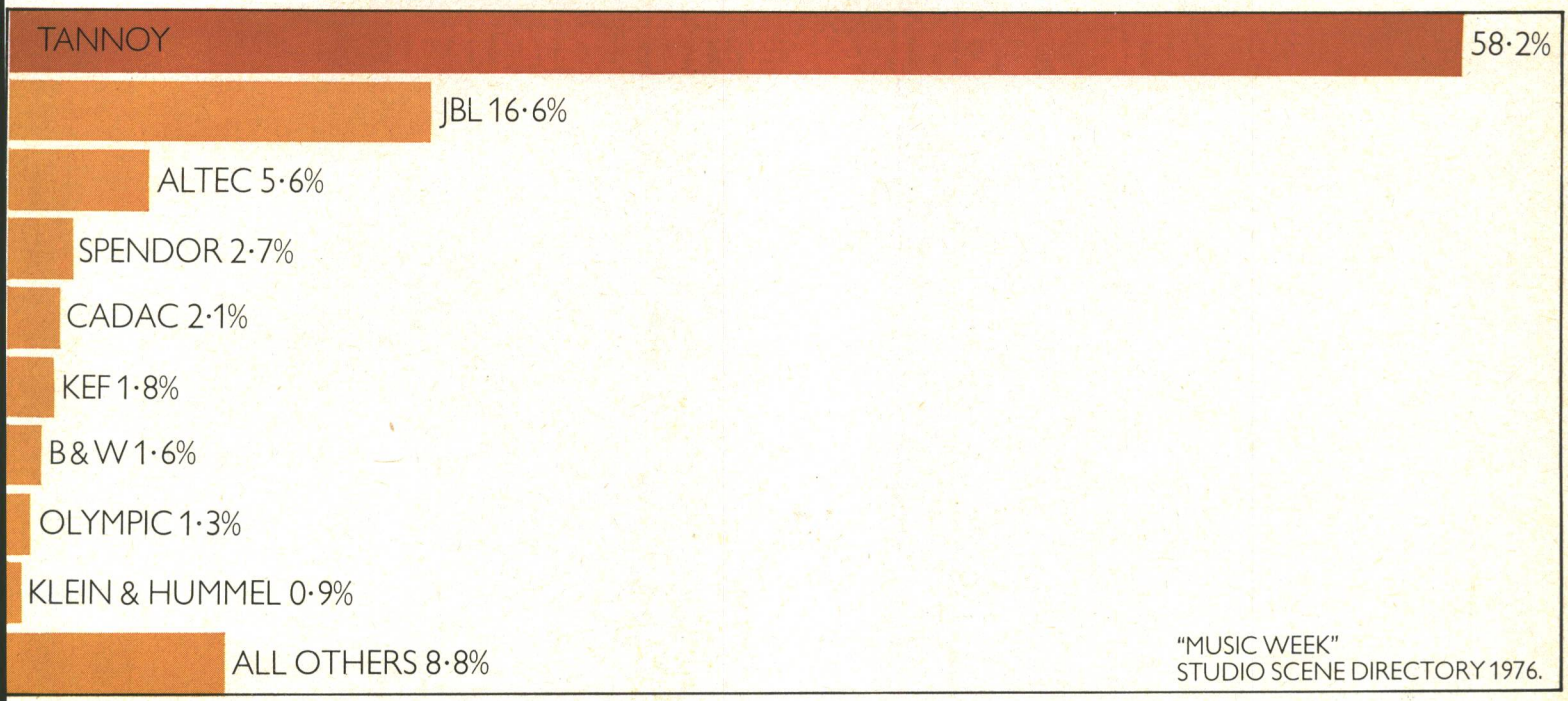
Unfortunately, because of the price of copper some types of wire have had to be introduced which are made from various alloys, or alternatively aluminium, and for a given thickness of conductor these have a higher resistance than pure copper. To play safe, for the best results use two-core mains cable of up to 13 amp rating if you require more than a 5 metre length. You may have to purchase a 3-core cable, in which case strap the neutral and earth wires together to lower further the resistance in the leads. For shorter runs, though, wire rated at 5 amps should be ample. Always make sure that connections are secure, and that all the bare wire is clasped round the terminal or clamped in the spring. Many terminals have a slot into which the wire can be pushed, and then clamped by screwing down the clamp.

Moving back to the power amplifier, the section which drives the loudspeaker often has around 40 or 50 dB of voltage gain incorporated. The circuit, however, has inherently far more gain in a forward direction, but negative feedback is employed to stabilize the gain, and therefore the response. In a good amplifier there should always be only a very short time delay between the signal entering the circuit and leaving it. Some components (such as certain integrated circuits) have such a poor inherent response without feedback that very heavy negative feedback is required to make them flat. Typically, a poor IC may well be 3 dB down in response at 25 kHz, falling by perhaps 6 dB per octave above this. Since a fall-off in response can also be related to a time delay, a sharp transient passing through the amplifier will reach the output stage many microseconds after it first entered. By the time the same transient has passed back again through the negative feedback loop to the input, any problems encountered in overloads might have already occurred. The stable door has been closed after the horse has bolted.

This type of action produces what is commonly termed transient intermodulation distortion (t.i.d.). The effects can become more noticeable as an amplifier is required to give more current, and in consequence some amplifiers will sound worse than others when connected to a difficult loudspeaker load. Sometimes an amplifier is stabilized by the addition of a capacitor from the second transistor collector back to its base, but this requires the front-end transistor to deliver high current into that base at high frequencies. The clipping margin is thus reduced (hence t.i.d.) and so its capability of reproducing sharp transients is limited. Notwithstanding these remarks, many amplifiers sound much better than square-wave photographs would suggest, and here it is important to realise that pre-recorded or radio originated music rarely contains transients with very fast front edges. Deficiencies shown in equipment in which exceptionally fast rise-time square-waves are used for testing are thus not necessarily relevant, although measurements of this type may be useful indicators to transient reproduction problems.

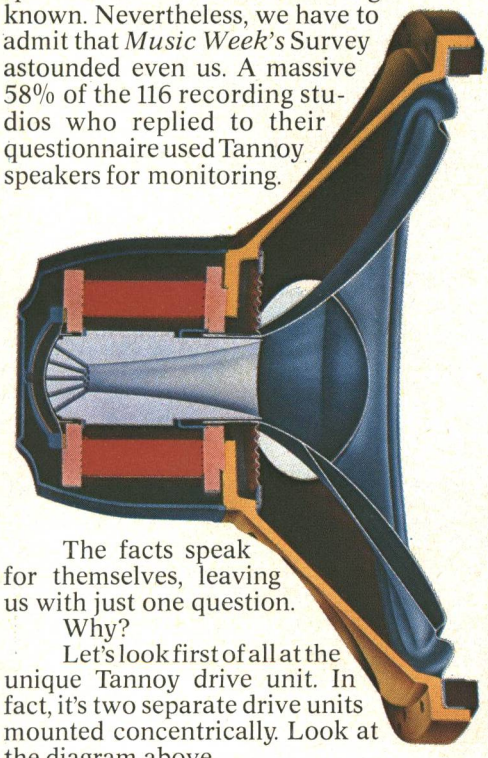
My recent researches into amplifier performance have shown that an amplifier will sound better if the entire forward gain section, having feedback round it, has as good as possible a response *without* feedback. Any necessary high frequency cut-off should in my opinion be provided either around the pre-amplifier, or passively on the main amplifier's input. This allows the phase-angle at high frequencies to be as small as possible between the input and output, thus the amplifier should be less affected by awkward impedances, etc., on its output. I consider that an amplifier's slew-rate is important within reasonable bounds, but I have found it more important to look at the phase-angle verses frequency between input and output. It is also interesting to examine the output from one channel fed with a lower level signal than the second channel, when the latter is allowed to drive the amplifier almost into clipping. The lower level channel should not be affected in any way, but sometimes a poor quality power-supply common to both amplifiers can show up problems. Crossover distortion and strange pumping effects can be noticed on some amplifiers if you reproduce a programme through them at an extremely low level. Check this with your particular amplifier/loudspeaker combination by listening 3 ft away from each speaker in turn, setting the level so that it is just audible and perhaps some 40 dB below your normal listening level. You may notice some strange effects as the music changes in dynamic

An independent survey of British recording studios speaks volumes for us.



"MUSIC WEEK"
STUDIO SCENE DIRECTORY 1976.

Among the people who move in those exalted circles, the popularity of Tannoy speakers for studio monitoring is well known. Nevertheless, we have to admit that *Music Week's* Survey astounded even us. A massive 58% of the 116 recording studios who replied to their questionnaire used Tannoy speakers for monitoring.



The facts speak for themselves, leaving us with just one question.

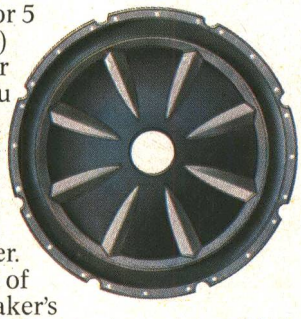
Why?

Let's look first of all at the unique Tannoy drive unit. In fact, it's two separate drive units mounted concentrically. Look at the diagram above.

In the centre is a high frequency compression horn; around it is a direct radiator bass unit – 10", 12" or 15" in diameter depending on the model you choose.

The high frequency unit drives through a phase-compensating throat which ensures that, by the time the sound reaches you, the two units are perfectly in phase. (Tannoy's elegant, 30-year-old answer to a problem which, some would have you believe, has only just been solved.)

Unusually, even our bookshelf speakers combine very high sensitivity (in the Devon, 96 dB for 5 watts at 1 metre) with high power handling. So you can play your favourite music at genuinely realistic levels, even with a modest amplifier.



The secret of the Tannoy speaker's high power handling is the unique Gird-acoustic cone (shown above).

The radial struts are carefully placed to stiffen the cone without significantly adding to its weight, enabling it to make larger excursions without break-up. Which, if you know the volume levels they use in studio monitoring, is just as well.

But you may well ask, do the speakers in my local Tannoy dealer's demo room bear any resemblance to the ones in the Air Studio's control room?

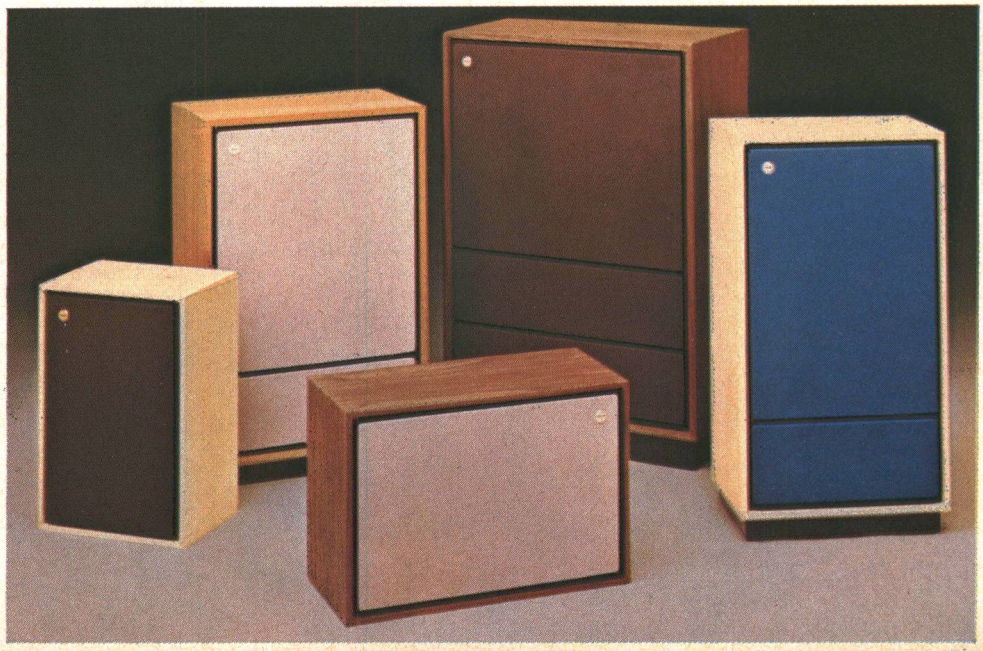
The answer is: yes. A Tannoy speaker unit on the production line could just as easily land up in the Canadian Broadcasting Company's headquarters as in your lounge.

Although we must be honest.

Of the 58% of recording studios who monitor with Tannoy's, about a third have them in professional cabinets.

TANNOY®

Tannoy Products Ltd., St. John's Road,
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The Telefunken TRX 2000 the receiver with digital frequency indication.



Low distortion reception depends on accurate tuning. This is why Telefunken have provided the TRX 2000 with highly stable, crystal oscillator-controlled digital tuning. It operates on all wavelengths; VHF, MW, LW and SW which, we believe, is unique. The digital display also doubles as a 24 hour clock.

We further believe that the TRX 2000 is the world's most sophisticated receiver. Sensitive and powerful, it has 4-channel or 2 x stereo capability and is designed to give the user maximum control.

The TRX 2000 is a brilliant example of the Telefunken ability to produce technically advanced hi-fi – an ability based upon years of professional studio experience.

Power Output
4x50 watts (continuous sine) into 4 ohms or 2x60 watts (continuous sine) into 4 ohms.

Output Monitoring
Four specially-developed inertialess (LED) VU meters monitor the output to the speakers; thus channel-balancing is simple and certain.

Sensor-touch Button Tuning
Up to seven FM stations may be pre-selected and recalled at the touch of a sensor button.

Automatic Switching of AFC
The AFC is switched off automatically during manual tuning and is brought in again four seconds after the tuning knob is released.

Signal Strength Meter
Yet another aid to accurate tuning – now those unknown, far-away stations may be easily tuned for maximum quality.

Reliability
Every single receiver is subjected to a test programme which includes two 24-hour soak tests. With each receiver, we include a test certificate which has been individually signed at eleven separate check points.

Free Brochure
To help you make further comparisons, we have published a brochure which gives what is possibly the most comprehensive specification ever produced for a piece of hi-fi equipment. Send for your free copy today–available from Telefunken Sales at the address below – and watch for more developments from Telefunken.

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Please send me a free brochure about the world's most sophisticated receiver THE TELEFUNKEN TRX 2000.

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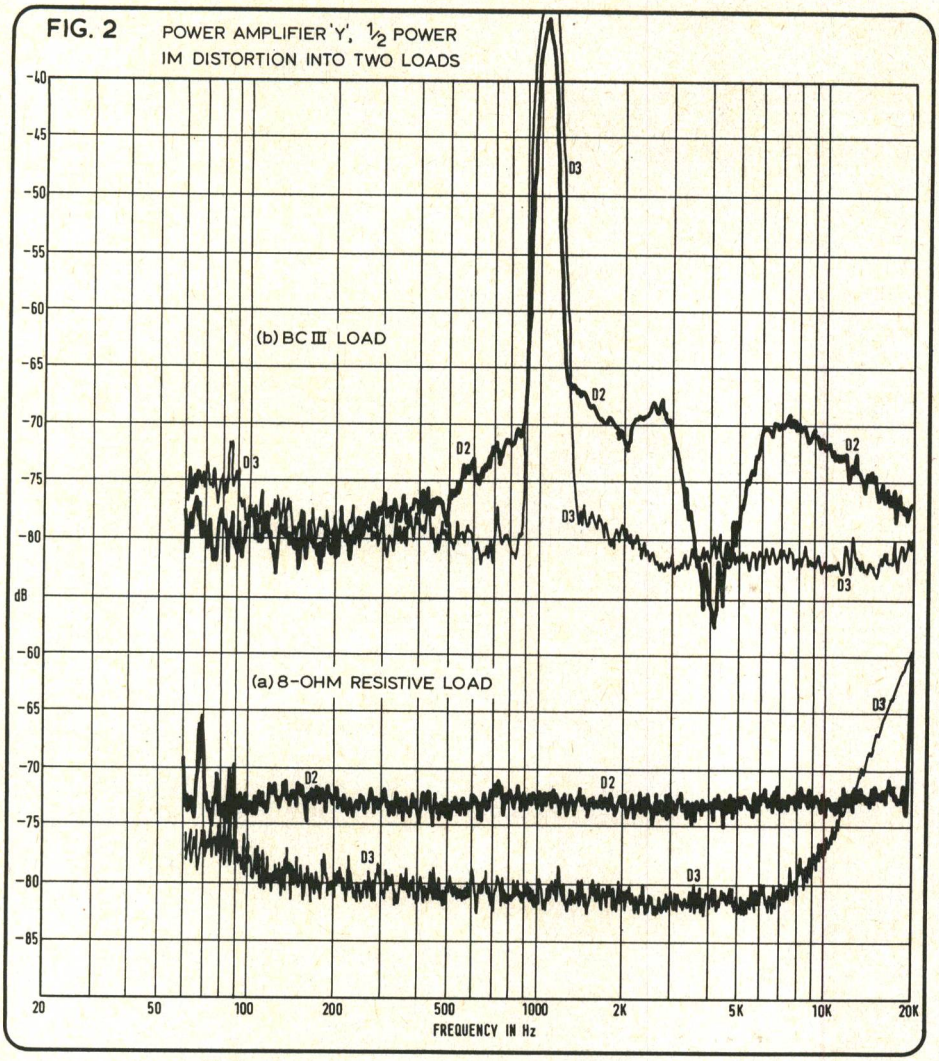
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level. This will almost certainly be an amplifier problem rather than one resulting from the choice of an inappropriate speaker.

If a very powerful amplifier is connected to a very sensitive loudspeaker, slight hum and hiss might be noticed even when the volume control is reduced to zero. This is because the amplifier has to be capable of bringing up the level from 100 mV or so to as much as 30 V (approx. 100 W at 8 ohm); thus the output noise, which may measure well with respect to peak output, could represent an inferior S/N ratio when the amplifier is peaking at not more than 3 V into sensitive speakers. For example, you may see an amplifier specified as having an 80 dB unweighted signal-to-noise ratio referred to its full output. This figure becomes only 60 dB if you refer it to 3 V instead of 30 V, and 3 V will still give over 2 W into a 4-ohm loudspeaker.

Hum is always most unpleasant if its higher harmonics predominate, i.e. if there is a considerable proportion of 150 Hz present. Such hum results if a mains transformer has insufficient primary inductance, or if its core is tending to saturate. Clean 50 Hz hum is never so objectionable. Noise, including hiss, having a small amount of 50 Hz hum which is just tolerable on its own, will become very annoying, and for this reason I suggest that amplifier noise figures should be given in reviews with main gain controls at zero, and with the measurements taken CCIR-weighted across the output terminals. You will have to be careful, though, if you wish to use sensitive speakers with a powerful amplifier, as this will have to have exceptionally good noise performance to avoid hiss problems.

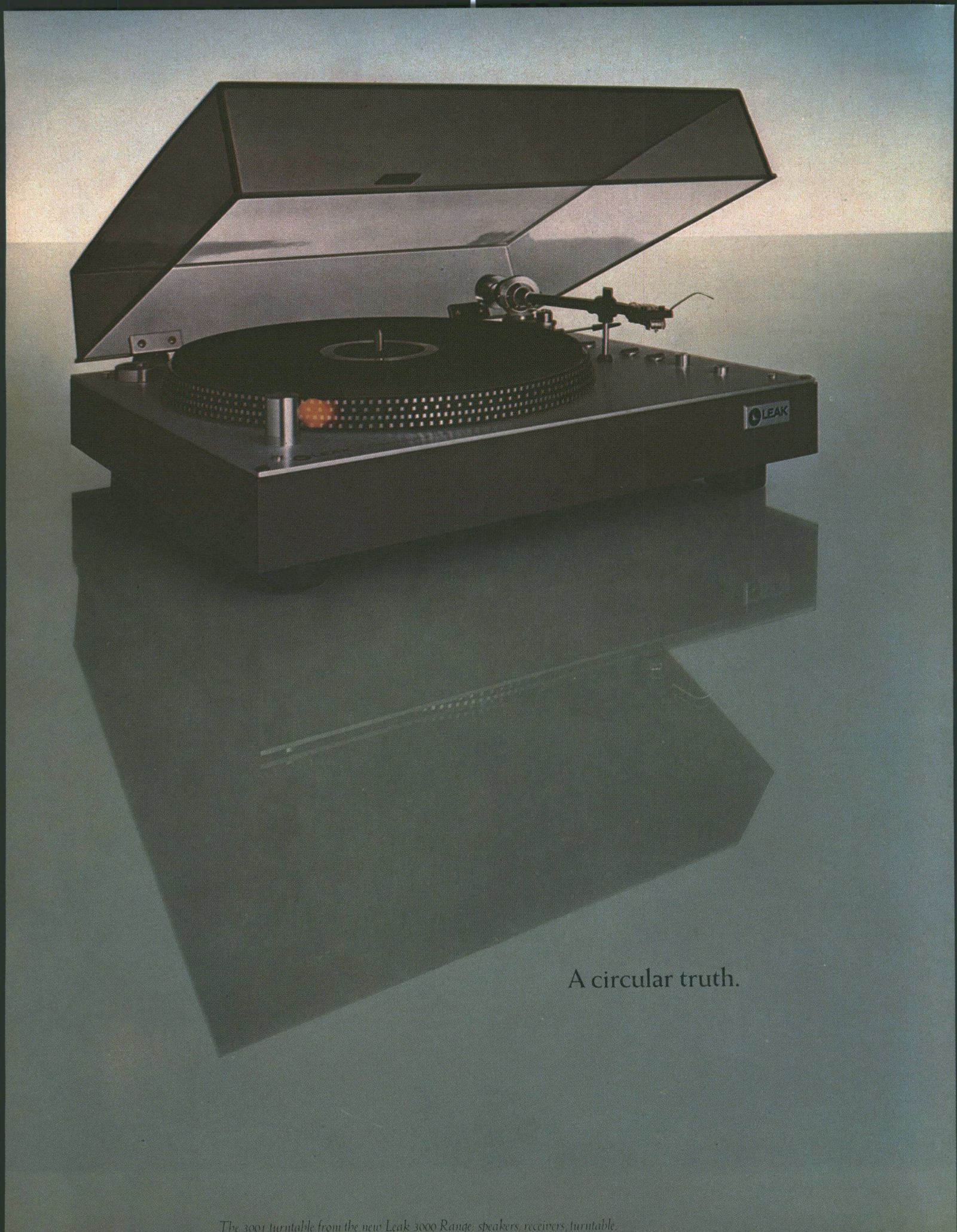
Output noise is even more important if you frequently use headphones, unless they are fitted with their own gain controls. Most headphones require between 100 mV and 1 V to drive them, and although stereo headphone sockets on amplifiers incorporate a series resistor, frequently the attenuation is insufficient, particularly for high impedance models. If you have trouble here, either increase the value of the series resistor, or use one of the currently available headphone distribution boxes, fitted with its own volume control. An objection to the simple series resistor, incidentally, is that the headphones' frequency response can suffer due to impedance changes with frequency; the correct method of attenuation uses a π network to avoid a high source impedance for the 'phones.

If you use extension speakers at the same time as your main pair, the load on the amplifier will be effectively that of the two loudspeakers in parallel. Two 8-ohm models therefore will be the equivalent of a 4-ohm one, assuming that the wiring has only a very small resistance. This will mean that in many cases the minimum impedance may be as low as 3 ohms, and you will need to consider this in choosing your amplifier. There should not be an apparent volume reduction on the main pair if you switch on the extra speakers, but of course the amplifier will then have to work twice as hard. For this reason, always use loudspeakers of 8-ohms or higher for an extension, though this unfortunately may rule out many an inexpensive 4-ohm model. Sometimes you may wish to install a volume control on the extension speaker, but bear in mind that this will have to handle the maximum voltage being fed from the amplifier. A 25-ohm control will thus be required to dissipate 4 W when the amplifier is delivering 10 V, so it should be of at least 5 W rating in an average installation to give long trouble-free service. A 50-ohm control would only have to absorb 2 W in the same circumstances, but you will find that you will almost always use only the very top part of the control. Always use wire-wound potentiometers, since normal carbon types are generally of insufficient power rating.

Finally, the pen charts reproduced here may prove interesting, and bring home some typical differences between amplifiers under difficult load conditions. They are all of swept intermodulation distortion measurements, charting the second and third order distortion produced by two tones sweeping from LF to HF. Fig. 1 shows the performance of 'brand X' amplifier when swept at half power from low to high, into a pure 8-ohm load (a), and then into a Spendor BC3 loudspeaker crossover having high-power resistive, capacitive and inductive loads on the relevant outputs (b). Each of these loads represents, as accurately as possible, the measured equivalents to the loudspeaker units employed in the speaker. This amplifier is seen to be capable of giving very low IM distortion at all frequencies into the above loads, no matter what the impedance is at any frequency.

The 'brand Y' amplifier (fig. 2) is normally regarded as a 100 W one, which clearly performs well into an 8-ohm resistive load, although running out of steam a little at very high frequencies (a). However, into the BC3 load taken at the same level, it will be seen that around middle frequencies in particular the pen literally goes off the top of the paper, showing severe distortion caused primarily by considerable current limiting. The amplifier is rated at only 50 W into 4 ohms, and perhaps there is no need to explain the matter further, other than to say again that the volume would have to be reduced to accommodate middle frequencies without noticeable muddiness and distress in reproduction on a BC3 loudspeaker.

It is perhaps worthy of note that a normal SMPTE intermodulation distortion test would not have shown up the problem if the usual frequencies of 50 Hz and 7 kHz were employed. Furthermore, harmonic distortion measurements would not have shown up the problem so clearly either, and it is thus so very unfortunate that equipment designed to make swept intermodulation curves is so expensive, costing around £8000. Nevertheless, such equipment would seem to correlate exceptionally well in test results when compared with subjective listening tests. ●



The 3001 turntable from the new Leak 3000 Range: speakers, receivers, turntable.

It is clear that during the last decade there have been dramatic advances in electronic circuitry design.

However, it is only recently that any of these developments have been matched by an equal sophistication in turntable specification.

The new Leak 3001 Turntable implements advanced electronic thinking in a formerly largely mechanical area.

The motor is driven by direct current, so it cannot hum.

Coupled to this motor, we have incorporated a Frequency Generator.

This generates the frequency of the motor, which it feeds back into a sophisticated electronic system.

Should there be any deviation whatever from the intended frequency, the electronic system will correct the motor speed instantaneously.

This means not only that any unintended speed variation is eliminated, but that the FG system enables all speed setting to be electronically determined by easily accessible front panel controls.

Naturally, the purely mechanical components have been equally carefully considered.

The tone arm is of a low-effective-mass design which will track with cartridges of high quality, its lightness contributing to a considerable reduction in record wear.

The wiring is low capacitance, should a four channel facility be required.

All specifications, from the oil-damped arm cue to the free-stop cover hinges are in keeping with the Leak tradition of comprehensive detailing coupled with controlled quality.

In total, the appearance reflects the precision design technology.

You will hear nothing from Leak 3001 turntables but music as it was recorded.

They achieve a new truth in sound reproduction.

LEAK

We promise to be true.

Rank Hi Fi, P.O. Box 70, Great West Road, Brentford, Middlesex, TW8 9HR.

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care for cassettes

Cassette Cabinet Attractive teak, finish hinged acrylic tinted cover. Accommodates 30 cassettes. **Ref 86 £7.13**



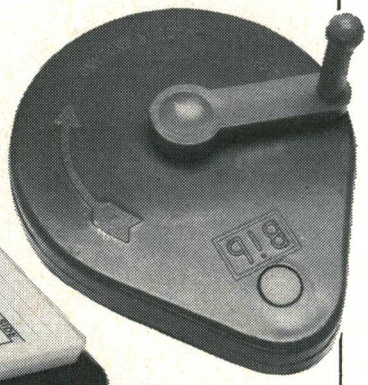
Tape Head De-magnetiser Removes unwanted magnetism from recorder heads which causes background noise **Ref 90 £4.32**

BSI Approved.



Fast Hand Winder

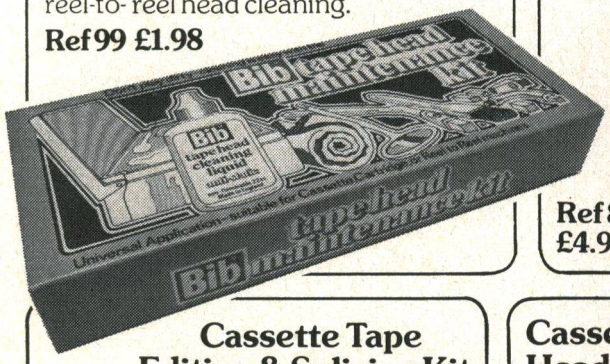
Enables one cassette to be rewound while playing another. **Ref 78 £1.06**



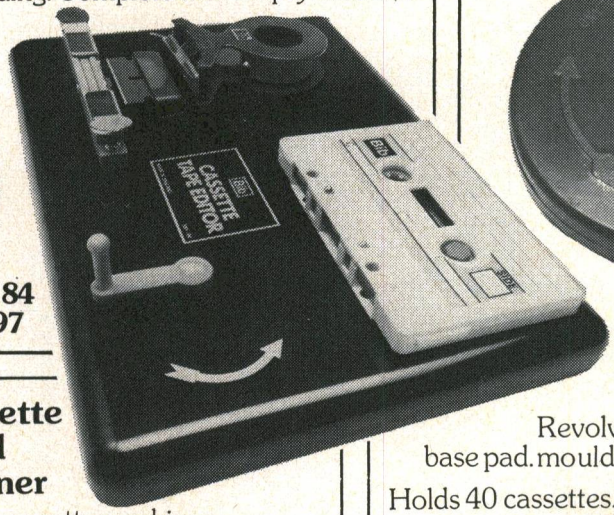
Tape Head Maintenance Kit

A universal kit with multi-angle cleaning tool for cassette, cartridge and reel-to- reel head cleaning.

Ref 99 £1.98



Cassette Editor & Winder Kit For easy, trouble-free editing, splicing, tape transfer and fast winding. Complete with empty cassette.

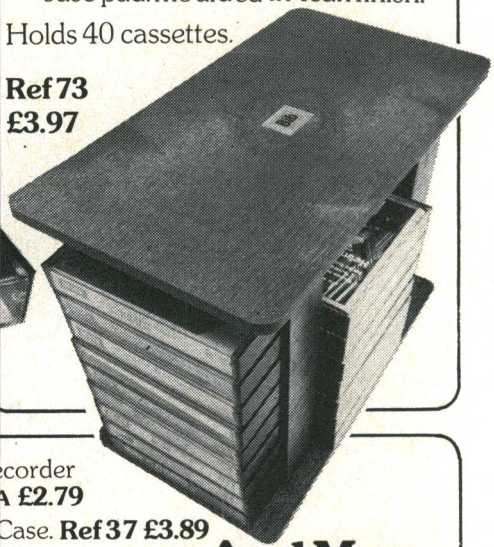


Ref 84 £4.97

Cassette Rota Rack

Revolves easily on felt base pad. moulded in teak finish. Holds 40 cassettes.

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Cassette Tape Editing & Splicing Kit

Everything you need to splice, cut and pierce. Includes splicing tape, tape extractor and winder.

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Cassette Head Cleaner

For all cassette machines. Removes oxide and dirt from heads in one quick operation.

Ref 31 70p



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Write for illustrated catalogue.

And Many More

Soundings

Donald Aldous

HAVE you ever heard of Edsel Murphy? Practitioners—amateur or professional—in the world of electronic equipment design or use will have encountered his findings, whether they are familiar with Mr. Murphy or not!

Let me list some extracts from Murphy's Law, which broadly stated is 'If anything can go wrong, it will'. A few extracts from the application of this law follow: I.1 All warranty and guarantee clauses become void upon payment of invoice. I.2 Dimensions will always be expressed in the least usable terms. Velocity, for example, will be expressed in furlongs per fortnight. II.1 Identical units tested under identical conditions will not be identical in the field. II.2 A dropped tool will land where it can do the most damage. (Also known as the law of selective gravitation.) II.3 The probability of a dimension being omitted from a plan or drawing is directly proportional to its importance. II.4 Interchangeable parts won't. II.5 Probability of failure of a component, assembly, sub-system or system is inversely proportional to ease of repair or replacement. 11.6 If a circuit cannot fail, it will. II.7 A fail-safe circuit will destroy others. II.8 A transistor protected by a fast-acting fuse will protect the fuse by blowing first. II.9 A failure will not appear till a unit has passed final inspection. II.10 A purchased component or instrument will meet its specs long enough, and only long enough, to pass incoming inspection. III.1 Manufacturers' spec. sheets will be incorrect by a factor of 0·5 to 2·0, depending on which multiplier gives the most optimistic value. For salemen's claims, these factors will be 0·1 to 10·0. III.2 In specifications, Murphy's Law supersedes Ohm's.

My grateful thanks to Macinnes Laboratories Ltd, Macinnes House, Carlton Park Industrial Estate, Saxmundham, Suffolk, for details of Murphy's Law, which, they explain, was given special consideration throughout the design, production and sale of the Amcron IC-150A input control centre. This unit has a phono circuit incorporating a complementary parallel discrete input, driving an operational amplifier output. This combination results in very low distortion, wide dynamic range, and a noise level 85 dB or more below a 10 mV input. The high-level amplification circuit uses a new IC design which, as well as offering very low distortion, has an unweighted hum/noise figure of 95 dB below the rated 2·5 volt output. It has comprehensive filters and tone controls, and a Panorama Control, which is a continuously variable control for infinite adjustment from stereo to mono to stereo reverse. This replaces conventional stereo mode switches and blend controls with what is called an intuitive control of stereo spatial dimension.

Incidentally, by itself the IC-150A can control and route signals among two turntables, two tape decks, a tuner and three auxiliary components. Amcron have a range of high power, high performance amplifiers, including the DC-300A and the M600, which can develop (mono) 600 watts rms into an 8 ohm load over a bandwidth of 1 Hz to 20 kHz at a rated rms sum total harmonic distortion of 0·05% at the fundamental output voltage.

My editorial in our September 1976 issue looked at the confused audio exhibition scene in the UK today. Unquestionably, more and more small exhibitions are being organized by dealers around the country, or by a few of the major manufacturers, such as the recent Pioneer Express train tour or Rank's Sounds Spectacular at selected venues.

'Small', I appreciate, is an adjective that must be used relatively when describing some of these provincial shows, some of which embrace 20 or more exhibitors, but I'm thinking of a national public exhibition of the standard and size of the Motor Show or the Ideal Homes Exhibition. Nevertheless these modest presentations have a following, it seems, and are cheaper to mount. Costing is obviously very important these days, and so these small shows must appear attractive, particularly to local dealers. But are they cost effective per pound of outlay? As I know from letters, these minor exhibitions can annoy visitors as, having travelled some distances to attend, they find that the firm or products they wanted to see and hear are not participating. Another facet of the story is, of course, that many British manufacturers outside the big league cannot afford to take part in the big national gatherings. Here, perhaps, the answer is the combined stand, on the lines of the overseas efforts of the FBA.

I repeat my closing request in the September editorial—what are today's hi-fi enthusiasts' preferences, hotel rooms or exhibition halls? London or provincial venues? Do you want lecture and technical seminars, or record industry/TV personalities, to accompany product displays and demonstrations? Is the spring or autumn the preferred time of year for such exhibitions?

A fascinating document has come my way. This is a study into the influences affecting purchasing habits of records and tapes, commissioned by Radio City (Sound of Merseyside) Ltd, from Williamson Marketing Associates.

The primary objective of the survey was to determine the way in which record purchasers bought sound records with particular reference to their listenership to local and national radio, and the role played by various sources of information in their decision. Radio City is, of course, the ILR commercial station covering Liverpool and environs.

Some of the findings were that, while record buying stretches across all demographic classifications, it appears to be concentrated among the younger age groups (12–24) among males, and within the higher socio-economic groupings. About half the record buyers (48%) spend less than £2·50 per month on discs, equivalent to one LP per month, while at the other extreme 5% claim to spend over £120 annually (more than £10 per month) on records. The average amount is about £3·60 per month. Few people, only 13%, claim to have bought a record before having heard it. The advance orders are limited to a few, very popular artists. A vast majority of purchasers had heard the record on one or more radio stations before purchasing it (in this project Radio City and BBC's Radio 1 featured importantly). In fact, hearing a record on the radio was mentioned as being 'quite' or 'very' important in respondents' buying decisions by 72% of the sample.

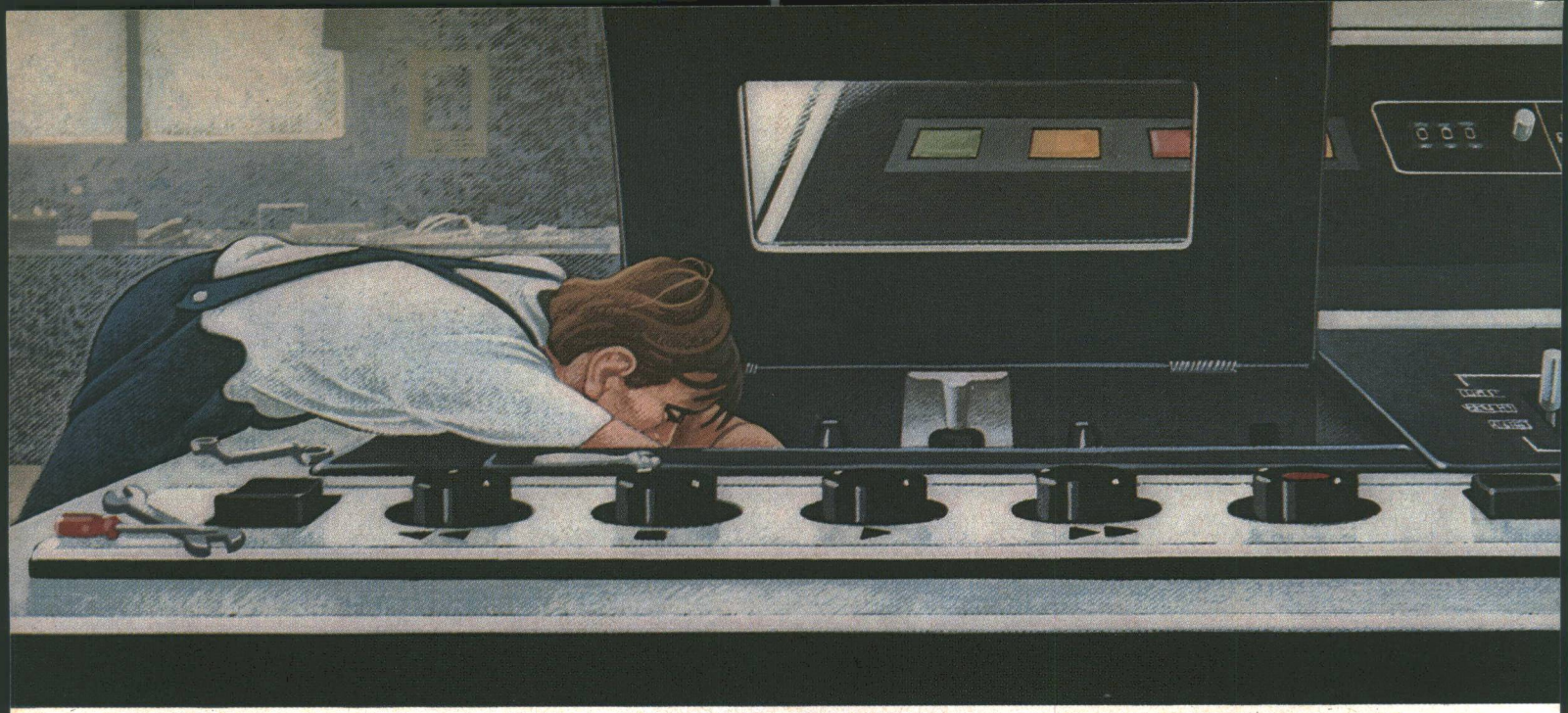
This research information was derived from 300 interviews obtained by randomly stopping record purchasers in the Merseyside area, and it was found that clearly the record buyer is not typical of the general population.

Another survey in *The Times* revealed that record sales are remaining steady or increasing in the under 25 years' age group, but older people are less concerned by the absence of recorded music recently acquired. The Top 20 accounts for some figure approaching half the total record sales, which at current retail prices were worth about £250 millions in 1975, and —with inflation—will probably attain £273 millions for 1976.

One factor influencing record sales adversely is the illegal copying of records—discs and tapes—as some 25 million blank tape cassettes were sold in 1975 and more last year. Increasing sales of video recorders, which are considered to be the next big selling home entertainment device, are being contested in the USA by two major film studios, Disney and Universal. They have filed a lawsuit against Sony Corporation claiming that 'by selling VTRs Sony has induced, encouraged and solicited' infringements of copyrights held by the studios covering films transmitted on televison.

KEF, who have developed a high quality digital music processor for the purpose of researching loudspeaker behaviour, presented a late-night programme of 'restored' Caruso recordings during the November Musical Weekend, organised for the last seven years by the Torbay Gramophone Society in Torquay. The 'cleaning up' of the sound quality on these old recordings is a revelation to all lovers of vintage vocal items, recorded originally by acoustic methods.

The application of digital techniques to the restoration of old records is due to Dr. Thomas A. Stockham, Jnr. of the University of Utah, where he is Professor of Computer Science and Electrical Engineering. He has been working for several years on his special process, and he has now formed a company called Soundstream Inc. (of which he is President) to commercialise the process. The first venture has been in conjunction with RCA—a 30 cm LP containing 16 of Enrico Caruso's most famous operatic arias and songs. Extracts from this record were played at the TGS weekend.



Of course cassette machines need servicing.

Inside that elegant teak finish, your stereo cassette deck is a delicate piece of precision built machinery.

It requires constant care and careful maintenance to keep it in good working order.

If that care is neglected, your deck like the engine of a sports car, will simply go out of tune.

It has been shown that a cassette player running for forty-eight hours without head cleaning can reduce maximum performance efficiency by as much as thirty per cent.

Tapes and cassettes also need care and attention.

The tape that goes into a cassette is just one eighth of an inch wide and nine microns thick.

On the surface of the tape there's a layer of ferric oxide, chrome dioxide or even cobalt doped ferric oxide.

In a C120 cassette there's 180 metres of tape. It moves through the head at one and seven-eighths inches per second. It's assembled from more than twenty-five separate parts.

A cassette then also is complex, and will only function properly in a well maintained machine.

And like so many complex things it has to be used properly. If it is it will continue to function efficiently almost indefinitely – if not, like a badly maintained machine, it will fail.

More than 60% of the reasons for the failure of cassettes incidentally can be directly attributed to faults in the cassette machine.

BASF was the first company to produce commercially magnetic tape. More than forty years ago.

They were one of the first companies to manufacture cassettes. Today they are one of the world's largest.

BASF know and care about tape and cassettes. Which is why they have now introduced the BASF Checkpoint range of cassette and tape care accessories.

Each one of the twenty-three items in the range has been carefully researched and is precision built as an aid to better care.

They have been designed to be simple and functional to use. And they are inexpensive to buy.

BASF for many years have given their cassettes a life time guarantee. It means that if by any mischance anything fails it will be replaced immediately. What, sadly, they are unable to replace is the sound on that tape.

So it's best to do the servicing in the first place.

Fill in the coupon below and we'll send you a complete catalogue of all the items in the BASF Checkpoint range.

Also, for 60 pence, we'll send you the Heinz Ritter's superb 'Tape Questions, Tape Answers' book.

BASF Checkpoint – protects your investment.



Dear BASF. I take your point. I've invested a lot of my hard earned cash in my cassettes and equipment – I now know that cassettes and tape have to be cared for. BASF Checkpoint seems the right way. And I know if any thing does go wrong BASF Checkpoint will give me a way of putting my cassette or tape right. Please send me all the literature.

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Books

THE GUINNESS BOOK OF MUSIC FACTS AND FEATS by Robert and Celia Dearling, with Brian Rust. 278 pages plus bibliography and index. Numerous illustrations, including many in colour. Price £6·50 (hard cover). Published by *Guinness Superlatives Ltd.*, 2 Cecil Court, London Road, Enfield, Middlesex.

THE GUINNESS books of curiosities and startling extremes are now well-known enough to need no general introduction, except perhaps to remind readers that if there was a composer who had his nose removed to cure VD, or a jazz musician who was stabbed to death with his own trombone, then they should automatically appear in a volume such as this, and they do. So do the details of no fewer than three Schuberts, five Wagners and seven Webers—all composers, but none a member of the trio we all know. How many pieces of music are there about railways? Which composer lived to the age of 99? Which was the first symphony to employ a bassoon or tuba or harp? Who wrote a concerto for crembalum, mandora and strings? How many 19th century symphonies are there in the key of E-flat-major? During which piano concerto is it directed that turkeys be released from a coffin? If these are the sort of hilarious or esoteric items you like to trot out at hi-fi or musical gatherings, then this is the book for you.

But it isn't all on this light-hearted level. The authors also provide a sort of general course in music, covering Musical Instruments (of ancient, modern or unusual interest), Composers, Repertoires (both instrumental and vocal), Orchestras and Concerts, Music Literature, the 20th Century, and Mechanical Music-Making—all interspersed with a multitude of facts and figures, both extreme and plainly encyclopaedic. A good example of the latter is the extensive list of works known by nicknames. It is a pleasant amalgam, but many areas of interest would be more accessible if the Index had included subjects as well as people. Also, the Index is not free of errors.

In the first edition of such a wide-ranging book there are bound also to be errors in the main text, a fact well appreciated by the authors, who note that it is impossible to produce a revised edition first! On Berlioz, for instance, it is wrongly assumed (p. 21) that the cornet part in the *Fantastic Symphony* was included in the original 1830 version, and three of his four symphonies are wrongly numbered in the nicknames section—despite correct dates. Another research point not updated is that the old mystery of the *cor anglais* (p. 34) has now been solved: the name derives from *angled* horn, not English horn.

But it would be grossly misleading to close on such a negative note, for any specialist could pick holes in a compendium such as this without impinging upon its main purpose, which is to entertain and inform the ordinary music lover. Which musical works are set in Edinburgh or Baghdad? What animals are mentioned in Haydn's *Creation*? Where are cakes or cream featured in music? Since when have Masters of the Queen's Music automatically received a Knighthood? Who produced an *Enigma Variations* forty years before Elgar? And who *was* stabbed to death with a trombone? It's all there, in a strongly bound and beautifully printed volume on which it might be worth spending that Christmas Book Token.

John Crabbe

THE ENCYCLOPEDIA OF OPERA edited by Leslie Orrey (advisory editor Gilbert Chase). 376 pp. Illustrated by half-tone and colour photographs, and line drawings. Price £10·50/£13·05 (*see below*) Published by *Pitman Publishing Ltd.*, 39 Parker Street, London, WC2B 5PB.

HURRY, HURRY! (as they say in the ads). Really, this book is supposed to rise in price from £10·50 to £13·50 on 1 January, but you might try your persuasive powers on a bookseller a few days late. Hurry for Orrey, in fact, and also hurray for Orrey, because he has produced something very special in reference works. If you have only one book on your shelf specially devoted to opera, it should be this one. It is not only admirably compiled, with entries on titles, composers, performers, places, etc., but beautifully laid out and printed, with fine illustrations.

A team of expert contributors, among whom are Alan Blyth of *The Times* and Elizabeth Forbes of the *Financial Times*, have combined to write knowledgeable, readable entries. A bold circular symbol is used to indicate those operas which have been recorded complete (and might also have been helpfully used to indicate those singers and conductors who have recorded). With American collaboration from Gilbert Chase, the scope is extended to musicals by such composers as Loesser, Porter, and Sondheim—from whose entry, however, *A Little Night Music* is surprisingly missing.

I note a few other matters for correction. Moore's *The Ballad of Baby Doe* has been recorded but lacks its symbol. Gluck's *Paris and Helen*, far from 'never' having been staged since its composer's day, has had two British productions in the last 20 years. (As the translator, I speak with feeling!) The conductor Capuana, listed as still living, died in 1969. But such are small blemishes in a major compilation.

Arthur Jacobs

BEETHOVEN: a Victorian tribute—based on the papers of Sir George Smart. By Percy M. Young. 19 half-tone illustrations, *xi* plus 125 pages. Price £5·00, hard cover. Published by *Dobson Books Ltd.*, 80 Kensington Church Street, London W8.

SIR GEORGE SMART was a great Victorian conductor, teacher and musical organiser/propagandist, who happened to be amongst British representatives at the 1845 Bonn festival for the unveiling of a Beethoven statue, towards which he had been active in raising funds. Dr. Young's book makes what it can of this connection by extensive quotation from Smart's rather boring diaries (plus a few excerpts from the young Queen Victoria's rather more readable notes), linked together by a somewhat thin narrative with plentiful footnotes.

Smart's comments are packed with trivia: details of hotels, meal times, travel arrangements, concert seating, and general small-talk, all quoted in full together with expense accounts, etc. Does Dr. Young (who is a scholar and writer of standing) really believe that this *pot-pourri* makes a viable book, and are his publishers being fair in using the name *Beethoven* to catch the reader's eye? A more general work on the 19th century apotheosis of Beethoven could perhaps draw upon *some* of the material used here, but much of this detail would surely be more useful as grist to the mill of social history than as an illumination of music and its cultural setting.

John Crabbe

SCHUMANN. By Alan Walker. 128 pages. Price £3·25. Published by *Faber & Faber* (Great Composer Series), 3 Queen Square, London WC1N 3AU.

ALAN WALKER packs an extraordinary number of facts and anecdotes into this slim volume. The book is merely a biography, with suggestions for further reading, and no attempt is made to assess the music except where the author is able to illustrate facets of Schumann's personality—e.g. his pre-occupation with coded references, such as the Sphinxes in *Carnaval*, the 'Distant Beloved' allusions in the Op. 17 *Fantasy*, etc. Walker updates long-held theories on the laming of the composer's right hand (mercury poison, rather than any mechanical contraption), the metronome markings, and Schumann's final illness (tertiary syphilis). Written in an easy style, with plenty of pictures, it is ideal for the young music lover, or general reader. Perhaps it is *too* spontaneously put together—in the final Dresden section we suddenly revert to 1835; Wieck, cast here in the role of villain, reappears. But I was compelled to finish it within a couple of hours. My only real grumble concerns the inclusion of a too-summary list of compositions.

Christopher Breunig

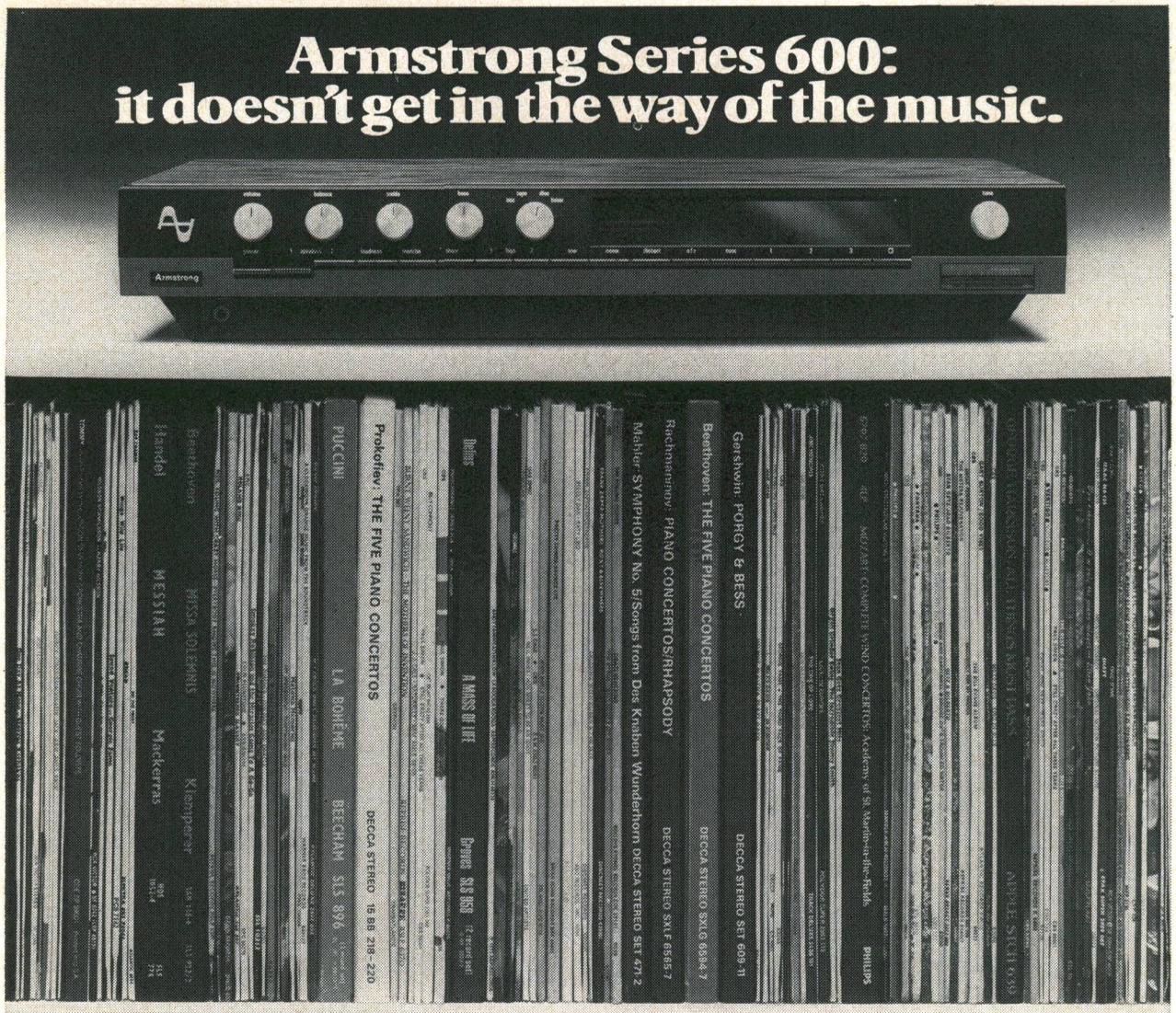
BRITISH MUSIC NOW: A Guide to the Work of Younger Composers, edited by Lewis Foreman. 246 pages. Price £6·50. Published by *Paul Elek Limited*, 54/8 Caledonian Road, London N1 9RN.

A GOOD GUIDE to the current musical scene is always welcome. We need introducing to our modern composers as often as possible for they are not easy people to get to know. This book does it in a friendly, personal sort of way by inviting many experts to contribute substantial essays on the outstanding 'young' composers. These include Musgrave, Crosse, Stevenson, Goehr, Wood, Birtwistle, Maxwell Davies, Hoddinott, Mathias, Maw, Bennett, Blake, Bedford, Leighton, McCabe, Tavener and many others. This is a readable and not too technical book and acts as a useful addendum to Francis Routh's 1972 *Contemporary British Music* which went further back to well-established composers and was rather more technical. Many people must hover on the fringes of becoming interested in what is going on and are frequently repelled by difficulties. If you are keen to make the effort, then I can think of no book that will help more, particularly as it offers a substantial bibliography and discography.

Peter Gammond

to page 77

Armstrong Series 600: it doesn't get in the way of the music.



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Letters...

. . . about hazy Sabatical memories

From: R. L. Clifford, 30 Meadow View Road, Sudbury, Suffolk.

Dear Sir, I was most interested to read Christopher Breunig's review of the reissue on LP of Beethoven's *Pastoral Symphony* conducted by Victor de Sabata (October, p. 165), as this performance was on the first set of classical records I bought nearly twenty five years ago. I thought the performance was magical then, but having long since disposed of the original 78s I never thought I would have the chance to hear it again. I wondered whether my pleasure had grown in the imagination, but having now heard the reissue I find it brings back all the original delight.

Clearly Mr Breunig does not much like either the performance or the recording, but I was most pleasantly surprised by the latter, finding it to have more 'body' and realism than many more recent new issues when played through two speakers. The quality he describes as 'muddy' I find just a little 'hazy' —the countryside as experienced on a hot summer's day perhaps!

Yours faithfully

. . . about the dynamic performance of pickup arms

From: Eric H. Leamon, 27 Church Road, Broadbridge Heath, West Sussex, RH12 3LD.

Dear Sir, It would seem that no serious work has been carried out on the dynamic performance of cartridge/arm combinations in relation to the manner in which this may modify the output of the cartridge. I use the term 'dynamic' in the sense that it embraces both the amplitude/frequency and the phase/frequency (group delay) performance; this latter term is not connected in any way with the present interest in 'linear phase' loudspeakers or the like.

Some time ago I constructed a conventional unipivot arm for use with the then recently introduced Shure V15/III cartridge, the design following all the usual well-known rules. The amplitude/frequency performance was measured using TCS 101 and mono gliding tone disc LXT 5346 and found to be ±1 dB 30 Hz–18 kHz at the output terminals of the amplifier with good waveform.

Many years ago I was associated with the father of it all, P. G. A. H. Voigt, and for nearly thirty years have lived with the final version of his Domestic Corner Horn and know that given a high quality input an orchestra appears to be in the concert hall behind the speaker; but if for example particular middle/low frequencies 'jump forward' and appear to be in the speaker itself, then something is wrong—but not with the speaker!

This latter effect was immediately noticeable with the V15/III/arm combination even though the steady-state input to the speaker could not be faulted using the gliding tone disc and looking for very small variations in amplitude. Bands 4A & 5A on STR 100 were also used, but no amplitude variation could be detected.

It is probably true that most mechanical 'nasties' in arms occur in the torsional mode, and considerable thought was given to this possibility and various mechanical tests carried out. The degree of compliance used to couple the balance weight of the rear of the arm was such that the resonant frequency of the weight and compliance was around 10 Hz. It was realised that with a normal unipivot arrangement the cartridge and arm are free to move dynamically in the torsional plane via the balance weight compliance. Torsional fluid damping using SAE 140 oil was applied between the arm and pedestal, and although a slight improvement resulted, the problem was by no means eliminated and no change could be detected in the amplitude/frequency response.

It was then realised that the basic thinking that the balance weight and its compliance should resonate at, say, 10 Hz might be wrong, because if the effective mass of the balance weight in the torsional plane is, for instance, fifty times that of the cartridge plus arm, then the weight could be regarded as an infinite mass. If this is so, then one is faced with the fact that the cartridge plus arm and the balance weight compliance should resonate at 10 Hz, which means that the compliance must be increased by about fifty times.

This theory was put into practice with quite dramatic results, the sound having a perspective and realism not heard before from a disc, with no trace of the previous effect. The steady-state amplitude/frequency performance was again measured using the gliding tone disc and no change could be detected.

The precise mechanism of the original effect has yet to be proved, bearing in mind that the amplitude response did not change throughout the experiments. It has been suggested that with the original compliance the cartridge/arm/compliance/balance weight combination may have had a characteristic similar to an 'all-pass' resonant circuit (phase shifter), because although such a circuit can have a flat amplitude response when measured with a sine-wave, it is known that when such a circuit is associated with composite music waveforms anything *other* than high quality may result. (See *Wireless World* March 1976, page 60.)

The object of this letter is to emphasise that a sine-wave gliding tone amplitude measurement on a cartridge/arm combination is not necessarily an indication of its performance as a high quality device, even though the cartridge may be faultless, and for complete dynamic evaluation, harmonic and phase distortion (group delay) should be measured by the use of suitable waveforms and instruments.

A disc recording of a $\sin^2$ pulse having a suitable p.r.f. and h.a.d. would seem to be called for, but I do not know of the existence of such a disc. As an alternative it should be possible to impart the required waveform to the stylus with a high quality transducer and pulse generator.

Thanks are due to Mr. K. J. Leamon jnr. and a colleague Mr. D. J. Hart for their interest and suggestions.

Yours faithfully

Book Reviews continued

TWENTIETH CENTURY COMPOSERS 4 (France, Italy and Spain) by Frederick Goldbeck. 147 pages. Price £4·50. Published by *Weidenfeld & Nicolson*, 11 St John's Hill, London SW11 1XA.

THIS BOOK attempts to do something similar to *British Music Now* for the composers of three countries, except that it goes further back, to Debussy, Ravel & Dukas, for instance, and then tries to push us toward the avant-garde. It is by no means as well ordered, and Frederick Goldbeck's fanciful style does not make for easy reading. Nevertheless it has lots of insights to offer in a disjointed sort of way and will tempt the reader toward some interesting record browsing.

Peter Gammond

IN BRIEF

CARL MARIA VON WEBER by John Warrack 411 pages. Price £12·50 hardback; £3·95 paperback. Published by *Cambridge University Press*. Bentley House, 200 Euston Road, London NW1 2DB.

John Warrack's study of Weber, first published by Hamish Hamilton in 1968, has established itself as the standard book on the composer. Reprinted to coincide with the 150th anniversary of Weber's death, it now adds to the very detailed account of his life and music a new concluding and summarising chapter, a select bibliography, and a family tree. For a reprint it may seem dear, but it contains numerous musical examples.

Peter Gammond

GRIEG by John Horton. 225 pages. Price £1·95.
SCHUBERT by Arthur Hutchings. 233 pages. Price £1·95.

Both now available in the Aldine Paperback series at the attractive price quoted. Published by *J. M. Dent & Sons Ltd.*, Albemarle Street, London W1X 4QY.

Letters for publication to: The Editor, Hi-Fi News & Record Review, Link House, Dingwall Avenue, Croydon, CR9 2TA.

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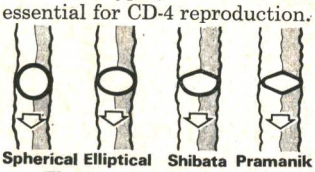
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What makes a good cartridge?

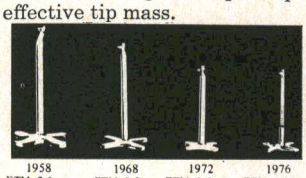
The job of a pick-up cartridge is to track the tiny undulations of a record groove and convert the physical movements of the stylus into electrical signals. When you consider the extreme narrowness of the groove and the complex nature of the recorded signal, and when you remember that a stereo recording carries two distinct sets of information simultaneously, you can see that the pick-up's job is not an easy one. Manufacturing skill and experience are important, but first you need a sound technological principle upon which to base your design.

First comes *a diamond stylus* that is delicate enough to follow the smallest indentations on the groove walls, yet strong enough to stand up to hours of abrasive contact with the record. The diamond must be of high quality, precision ground to the right shape, and polished to a uniform smoothness. A simple spherical tip can perform well on normal stereo records and costs less than the more complex shapes. An ellipse can track the higher frequencies more accurately as its slim lateral radius can enter even the finest indentation. But the best high-frequency performance is obtainable from multi-radial shapes like the Shibata and Pramanik types, and these are essential for CD-4 reproduction.



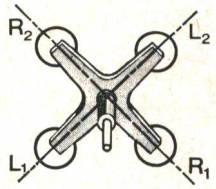
Spherical Elliptical Shibata Pramanik

The next requirement is *a robust, low-inertia cantilever.* The cantilever or shaft which carries the stylus must combine rigidity with mobility as it has to support the tracking weight of the pick-up while retaining sufficient pliability to allow the stylus tip full freedom of movement within the groove. As the forces of acceleration to which the stylus assembly is subjected can reach as much as 1,000 G, the cantilever must be of robust construction but with low inertia. A tubular shape offers the best strength-to-weight ratio, and one of the most suitable materials is aluminium. But once again, the higher demands made on a CD-4 pick-up warrants the use of sophisticated materials like beryllium, which gives the cantilever an extremely high resonant frequency and is light enough to be used in a solid section without increasing the pick-up's effective tip mass.



1958 ETM: 2.6 mg | 1968 ETM: 0.8 mg | 1972 ETM: 0.5 mg | 1976 ETM: 0.22 mg

An efficient conversion mechanism is required to translate the physical movement of the stylus into electrical currents that can be accepted by the amplifier. Many pick-ups use a system of moving magnets to effect this conversion. This principle has the disadvantage of adding bulk and weight to the load already imposed upon the moving stylus. A less clumsy technique, called the moving micro-cross, was invented as long ago as 1958 — and it still remains unbettered. Its advantages lie in the fact that the stylus is not directly attached to the magnetic coils, but 'floats' freely on a compliant butyl pad. This holds the arms of the cross away from the magnets, and four permanent magnetic fields exist in the minute gaps between the arms of the cross and the pole pieces. Movements at the stylus tip are transmitted through the cantilever to the cross.

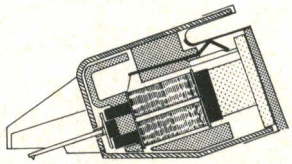


Indentations on the left groove wall swing the micro-cross on the axis R_1–R_2. This alters the distance between the arms L_1–L_2 and their corresponding magnets, thus changing the permanent field and creating a left-channel signal. The right side of the groove swings the cross on the other axis, L_1–L_2, thus altering the magnetic fields at R_1–R_2 and creating a right-channel signal. This technique ensures maximum channel separation, even on CD-4 recordings.

The best pick-up cartridges must also offer *long-term performance.* Most modern pick-ups live up to their specifications when new, but they can show a marked deterioration when the original stylus is replaced. This is because the cartridge body and the original stylus were carefully matched to each other and adjusted for optimum performance during manufacture.

By removing the worn stylus and inserting a new one, you lose this critical final adjustment, and the performance of your record player can sound noticeably different as a result. Some companies have realized the seriousness of this problem and now suggest that the pick-up is returned to their factory for the new stylus to be fitted. This is a very good idea – but what do you play in the meantime?

The answer is to buy an integrated cartridge in which the stylus is rightly considered to be the major component, and the cartridge body is made to be disposable. After all, it is the stylus which is so expensive and difficult to make and so vital to the overall performance. By comparison, the cartridge body is a simple, low cost article. It is therefore logical that when a stylus is worn out, the remaining life of the cheap coils and magnets which carry it can be sacrificed in order to ensure the continued "as new" performance of the whole system.



An integrated cartridge is a sealed unit containing stylus assembly, compliance, magnets, coils and connection terminals. Each component is factory matched to give its best performance in conjunction with the other components. This balance is so precise and so important that the replacement of the stylus, even by the most skilled hand, would upset it irretrievably. So in an integrated cartridge the stylus cannot be replaced. Once the original stylus has become worn, you simply throw the whole thing away and start again with a complete, perfectly matched new pick-up that will sound just as good as the first one.

Who makes a good cartridge?

Bang & Olufsen do. In fact they make four different models with standard ½in fixing centres – so you can choose according to your arm and your pocket. They are all integrated units and use the moving micro-cross principle – that's why they are called MMC cartridges. MMC 3000 and 4000 are for stereo/matrix use; MMC 5000 or 6000 are JVC A-rated for CD-4 reproduction. They cost less than many conventional two-piece pick-ups of equivalent quality – and you get "original" performance throughout the life of your record player, not just during the comparatively short lifetime of the first stylus. Ask your nearest Bang & Olufsen dealer for a demonstration.

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Audio Patents Adrian Hope

ANY new field of public interest always produces a flood of associated new inventions and patent applications covering them. Because it takes a matter of several years for each British patent application to progress to acceptance, published patent activity always lags a few years behind public interest. The flood of four-channel and quadraphonic patents that followed a few years behind the original surround-sound boom now appears to have abated, and in its place comes the beginning of what will probably be a flood of patents for systems of improving headphone reproduction. The latest, from Beyer of Germany (BP1 437 129), recaps on existing problems with headphone listening and proposed solutions to-date. As the patent explains, when we listen to loudspeakers the ear/brain combination quite often puts the perceived sound at a position remote from the true source. This is one reason why headphone listening produces an 'orchestra in the head' effect, rather than a stereo spread 'out of the head'. It is of course possible to record the original signal by using dummy or artificial head techniques, but this is generally unacceptable, because then loudspeaker listening will be adversely affected.

The recent patent confirms that Beyer have joined the list of firms experimenting with ways of enabling the listener to modify a sound signal intended for loudspeaker reproduction so as to suit it to headphone reproduction. Beyer claim a theoretical concept which involves first determining the required electro-acoustical transfer function (defining the relationship between the electrical voltage applied to a reproducer and the signal impinging upon the eardrums of a listener). This is achieved by measuring as a function of frequency the amplitude and phase of a sound wave at the eardrums of a listener, using an electrical test signal applied to a given loudspeaker. The second step of the method is to determine the electro-acoustic transfer function of a given pair of headphones, by measuring as a function of frequency the amplitude and phase of the sound waves at the eardrums of the listener using an applied electrical test signal. Subsequently, to provide loudspeaker-like headphone listening, the loudspeaker signal is fed through an electrical network with a transfer function equal to the ratio of the first and second measured functions, *i.e.*, the ratio of the required transfer function to the earphone transfer function. Although it seems likely that the method will work as claimed, it appears to require a degree of individual tailoring of each system to the individual listener and his room, loudspeaker and headphones. Possibly Beyer have in mind the design and sale of a junction box with a variable transfer function and instructions for the listener on how to 'tune' it to best effect. Alternatively, Beyer may have in mind marketing junction boxes with their headphones, which enable them to simulate the sound of a specified range of loudspeakers.

Meanwhile, Ryotaro Nohmura of Osaka, Japan, has taken out a British Patent (No. 1445 150) on what must be the oddest-ever loudspeaker system. A chair or bed is constructed with a tubular steel or plastics frame and covered with a canvas, leather, or plastic skin. Inside the bed or chair frame several loudspeakers are mounted, on internal baffles and with their cones positioned to fire up into the body of anyone sitting or lying on the furniture. The speakers are then plugged into a power amp fed by a record or tape deck and, to quote the inventor, 'sound waves emitted by the loudspeakers generate rhythmical vibrations in the body'. As for the advantages of the invention, one cannot do better than to quote the inventor again 'Different from regular, and therefore monotonous, vibrations of conventional massaging machines; irregular but rhythmical vibrations are given to the human body supported on the chair or on the bed by the changing amplitude of the sound of music from the loudspeakers, creating a massaging effect which gives a comfortable feeling to and improves the blood circulation of the human body, contributing to the maintenance of health and beauty as the result.' To ensure that no one is over-dosed, readers are reminded that 'the massaging force can be adjusted by varying the volume.' (See Tokyo Show on p. 59 for further information/photo).

Tape Matters Douglas Brown

AMONG all the events planned to celebrate the centenary of Thomas Alva Edison's discovery in 1877 of a method of recording sound, there is one in which everyone with a tape recorder can play an active part. This year's International Amateur Recording Contest has a special category for tapes not exceeding 15 minutes' duration on the subject: 'One Hundred Years of Sound Recording and Reproduction'. If you think you can put together a brief documentary on this theme, now is the time to start work.

Those who submitted entries in the 1976 Contest did extraordinarily well for themselves. The presentation of prizes for the best tapes in the British Amateur Tape Recording Contest turned out to be an altogether more jolly occasion than anyone might have anticipated because, in addition to the usual array of cups and trophies—one from virtually every major tape recording company operating in Britain—there were prizes valued at between £1,500 and £2,000 which had been won by U.K. entries in the International event.

Bill Jackson's documentary, *The Tawny*, which had earlier been judged Britain's 'Tape of the Year', was a comfortable winner in its class in the International—the prize was a £250 Philips recorder.

Richard Savage's *Nightjar Territory* took the premier 'Sounds from Nature' award in the International—a Neumann condenser microphone.

But the real triumph was Colin Humphreys' *Darling*. It did well in the British Contest, but I remarked here in November that I felt it had been under-marked. The international jury agreed with me, for it chose it for its Grand Prix tape and Mr. Collins collected a Revox A700 worth about £1,300.

With British Tape amateurs regularly collecting such valuable prizes abroad, I am surprised that more do not try their luck. Details of the 1977 Contest are now available from: John Bradley, 33 Fairlawnes, Maldon Road, Wallington, Surrey.

The jury sessions of the 1976 International Contest took place in the Lausanne studios of the Swiss Broadcasting Corporation, the same building in which the jury sat for the first such event 25 years earlier. M. Bernard Nicod, Director of Radio Programmes at Lausanne, was a witty as well as highly efficient chairman of the jury.

Swiss Radio gave the Contest a great boost on the air, with a documentary feature about the history of the event, several broadcasts featuring winning tapes, and a live transmission of a concert given specially for the jury by the Choir of Radio Lausanne.

Swiss Radio was the host at the banquet which rounded off the programme, staged in the medieval castle of Oron. This was a magnificent occasion, with trumpeters in gold and crimson regalia to welcome the company as it filed over the drawbridge (many with microphones held out in front of them!).

Over these 25 years, Swiss Radio has regularly broadcast the best of the recordings made by Swiss amateurs, and it has recruited some able members of its staff from among their ranks. Only in France has it proved possible to achieve a similar degree of cooperation between the radio professionals and the amateur enthusiasts.

I have done a fair amount of broadcasting myself and have never been present at a more relaxed and enjoyable, yet well-coordinated and lively transmission than that which went out from Radio Lausanne during one break in the judging. There were four different interviewers: two professionals and two amateurs. They called in visitors from all over Europe for two-minute contributions and laced the whole thing together with extracts from the tapes, all, so far as I could see, without prior rehearsal and with a minimum of prior planning between studio and control room. It was spontaneous and it was fun for everyone involved, and that must have been communicated to the listeners.

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Gramophile

Royal Opera Report

At a reception to present the Royal Opera House Financial Report, it became apparent that Covent Garden has found itself in the position of Lewis Carroll's Red Queen; having to run ever faster in order to stay in the same place. Despite an increased Arts Council Grant for the 75/76 season of nearly £4m, an unexpected increase in touring attendances and receipts, and a substantial programme of cost reductions, including stringent controls of staffing levels, the 'Garden' only just managed to make a small profit of £115,000 which, at 1% of the total turnover, is negligible. The source of these troubles is, of course, inflation. The fall in exchange rate over the last four months alone has cost the company £70,000, and Chairman Sir Claus Moser pointed out that 'inflation has a much more marked effect on us than on a normal business because, like all artistic institutions, we cannot recoup inflated costs by increasing productivity'.

The problem has been intensified by the fact that artists' working conditions at Covent Garden have become so bad (a House of Commons Working Committee called back-stage conditions a 'slum') that redevelopment, first stage plans of which are being considered by the GLC, is urgently required. 'It would seem a funny time to embark upon an extremely costly redevelopment scheme' said Sir Claus, 'but it really is a now-or-never situation'. A lottery has been considered as a means of raising the extra money required, but present Government regulations do not permit a net annual gain for the promoter of more than £30,000, an unrealistic fraction of the £3m required. A good start for the fund has been made, however, with a donation of $100,000 from Walter Annenberg and his wife in order to celebrate the Queen's Silver Jubilee, and thanks is due for the continued support given by the Opera's many industrial sponsors.

Artistically the year has been very rewarding, with a successful exchange between the Royal Opera and La Scala, Milan, and the visit of the Royal Ballet to the USA as part of the Bicentennial celebrations. New productions included *Siegfried* conducted by Colin Davis, and at the end of the season, Hans Werner Henze produced his controversial *We Come to the River* which had been commissioned by Covent Garden. A total of 789 performances were given, reaching an estimated live audience of one million, which, if the radio and television audience are added, swells to over nine million. This number of performances is much greater than the number put on by any other European Opera House but, as Sir Claus pointed out, 'with a total subsidy about a third of that received by the Paris Opera'!

Merrie England

Sir Edward German, who died in 1936, was once hailed as the natural successor to Sir Arthur Sullivan after completing Sullivan's unfinished opera *The Emerald Isle*, but it has become apparent that German possessed nothing like Sullivan's gifts. This is perhaps the reason why his operetta *Merrie England*, although a great success when produced at the Savoy in 1902 and a firm favourite in the first half of this century, has been poorly served on record, the last recording being by the Sadlers Wells company in 1960. A new 3-record set of the complete opera has now been released by Stockwell College of Education in conjunction with 'Sound Systems' of Bromley, Kent. The College put a lot of work into presenting their first live show (with the College Choir and Orchestra directed by Pamela McGairl), in May this year, and received very favourable reviews. 'Sound Systems', sponsors of the production, had recorded all the shows in stereo for the College's own archives, but the quality of the recording turned out so well that, despite a few shaky moments, they decided to make it available to the public, warts and all. The boxed set is available at a price of £5·45+70p p & p (cheques payable to Stockwell College, Merrie England a/c) from Stockwell College of Education, The Old Palace, Rochester Avenue, Bromley, Kent, BR1 3DH.

Goossens Galore

Last month Leon Goossens was featured on the first release on RCA's 'Harveys of Bristol English Series', sponsored by Harveys, the sherry shippers. On the album *Soliloquy*, he performs Elgar's 1933 work, the Soliloquy for Oboe and Orchestra, not previously recorded, which was written especially for him and completed by Gordon Jacob in 1967. The new RCA series, concentrating on music by English composers, will feature the Bournemouth Sinfonietta throughout, and albums planned will include Edmund Rubbra's 10th Symphony conducted by Hans-Hubert Schönzeler, Richard Arnell conducting his 1st Symphony and Robert Simpson his 2nd, as well as pieces by Delius and Vaughan Williams.

Leon Goossens also appears on an album of Sir Eugene Goossens' music that Unicorn are planning to release early this year. It features a transcription from 78s of Leon Goossens playing his brother's 1927 Oboe Concerto with Walter Susskind and the Philharmonia Orchestra. Other works to be included are new recordings with the NPO conducted by the Canadian Gaspare Chiarelli (engineered by Bob Auger) of Sir Eugene's *Sinfonietta*, *Tam o'Shanter Scherzo* and a late work (1962), the *Divertissement*.

Philips Prizes

Two Philips recordings were awarded prizes last October by the Mozart Society of Vienna in their annual series of Wiener Flotenuhr awards, which are given for outstanding Mozart recordings. An award was made to Ingrid Haebler and Henryk Szeryng for their 6-record set of the 16 Sonatas for Violin and Piano, and a second award was made to Alfred Brendel, Neville Marriner, and the Academy of St. Martin-in-the-Fields for their recording of two Piano Concertos, Nos. 18 and 27 in B♭, K.465 and K.595.



Aaron Copland (left) with producer Roy Emerson

Copland Capers

American composer Aaron Copland, who was 76 last November, was in England in the late autumn in order to receive an honorary degree from Leeds University. While in Leeds he conducted a concert of American music with the BBC Northern SO which included three of his postwar works: *In the Beginning*, the *Tender Land* Suite and the Clarinet concerto (with Gervase de Peyer as soloist). His Symphony No. 3 also dates from this period (1946), and this work (with the slight 1966 revisions) was recorded for CBS in October at Abbey Road Studios with Mr Copland conducting the New Philharmonia. Present day composers seem to be a robust bunch: despite his age, Aaron Copland was full of enthusiasm and had no trouble in subverting a large NPO to his will. Major works have been sporadic since the early fifties, but we have heard that Copland has been asked by Rostropovitch to write a Cello concerto and it will be interesting to see if he has something to say in this medium.

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TGS Weekend

Torquay's Palace hotel was again the venue for the seventh Musical Weekend, held under the auspices of the Torbay Gramophone Society.

Peter Hobbs (TGS Chairman) welcomed the 200-plus members and visitors from all over the UK on the Friday, before introducing music critic Kenneth Loveland in an affectionate and reminiscent sound portrait of his beloved Vienna. Raymond Cooke (KEF) closed the evening with a look at the past history of the phonograph and gramophone, illustrated by some recording milestones, and then gazed into the future of record-making using digital to analogue techniques, of special interest to him as his company has developed a high quality digital music processor to study loudspeaker behaviour.

On Sunday morning, Joe Pengelly (BBC TV news presenter) anticipated the 1977 Edison 'invention of the talking machine' centenary celebrations with a fascinating programme, illustrated by the sight and sounds, of some early cylinder/disc reproducers from his personal collection.

Among the personalities from the major record companies introducing their own sessions were the irrepressible Ray Burford on 'The Language of Music', complete with scores; an amusing duologue by Joan Coulson (Promotion Manager) and Bryan Crimp (A & R Product Manager), of EMI Records, using slides and recent EMI issues to reveal how a programme can be compiled; Ray Crick (Classical Promotion) played superb extracts from the new recording by Decca of Wagner's *Meistersinger*, conducted by Solti, with the VPO. Robert Leslie, on behalf of Polydor Ltd., played some brilliant excerpts from current Deutsche Grammophon releases, including performances by Kleiber, von Karajan, Abbado, Ozawa, and Jochum's version of *Meistersinger*.

Veteran record collector and equipment reviewer Bert Webb captured a big audience with 'The Object All Sublime' namely the attainment of the realism of a 'live' performance on gramophone records, particularly successful with some Argo and Exon Audio LPs. John Borwick's session was devoted to a conversation with John Carol Case, the eminent baritone, recently retired to teach singing, illustrated by recordings from his long career.

A highlight of the 1976 TGS weekend was an audio-visual presentation by Humphrey Burton (Head of Music & Arts, BBC Television) under the title 'The Joy of Music in Sound and Vision', using the latest Philips N1502 TV recorder replayed some extracts from BBC films—like Ken Russell's 'Elgar' and 'The Ring' recordings in Vienna.

A 'live' recital of virtuoso and gypsy violin music, played by John Georgiadis, leader of the LSO, with his wife Susan at the piano, proved to be a most exhilarating way to close the proceedings.

Gilbert Parfitt (Chairman, National Federation of Gramophone Societies) expressed the thanks of everyone present to the TGS organisers for all the hard work involved.

Shorry about that!

A Mr. Bibbing of Bath has written to point out that we've gone and done it again. We informed our readers that much of the apparently 'old wine in new bottles' represented by the record 'The Pleasures of their Royal Courts' (November, p. 165) had not been bottled before. In fact, this particular, wine *did* appear in a WRC bottle some (hic) five years ago and we've been swigging it ever since, which is why we got it wrong er, no, that is to shay we made a mistake, and anyway it's (hic) not our fault if the record company doesn't put the bl**dy dates on . . .

Denis Vaughan

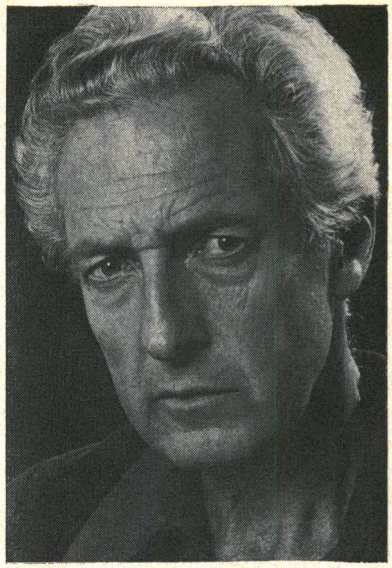
In this jet-set musical age, too often we hear of conductors and soloists rushing in to make a recording with little or no regard for the finished result, and, in fact, very little preparation. It was refreshing, therefore, to meet Australian conductor Denis Vaughan on his recent visit to the UK. Vaughan lately completed a recording of Mozart's *Il Re Pastore* to be issued by RCA, which was approached with a typically considered artistic attitude. 'I met the cast at least three months before the date of the first session and went over the whole score with them and tried to iron out all the problems then. When we came to the actual recording the opera was finished in a comparatively short time.'

As well as performance, Vaughan takes a close interest in the technical side of the production, an aspect that many musicians are happier to ignore completely. '*Il Re Pastore* was miked fairly closely so that the overall effect was far more intimate than with many opera recordings—as it should be for a chamber work. Also, the singers had to take much greater care to keep the line smooth than with a more distant set-up. The hall in which we made the recording was so reverberant that we were able to maintain a warm acoustic. All the stereo was done electronically during the editing—I prefer to work this way as it leaves one so much greater control over the finished result. I believe in creative recording, and I don't see why the orchestra shouldn't sound a bit distant there, or a bit closer here, if that is what the composer had in mind.'

The opera was recorded with the Orchestra of Naples with whom he is very pleased, though he did comment: 'What it *is* difficult to get in Italy is that very crisp ending to a phrase that is so very right for Mozart—I still don't know if we got it completely, but at least we were aiming in the right direction.'

The difference in orchestral styles was discussed at some length. 'People believe what their teachers believe—there are so many points of style which musicians all over the world just don't know about. London is particularly lucky in this respect, partly because it has a well-informed critical body who keep hammering away at the musicians. I did some Handel concerti grossi in Germany lately, and frankly it took me five days to get the orchestra playing in style, and I only had six days in all. They still played as if he were a German composer, and ignored the French and Italian influences.

Vaughan's own background encompasses a very wide musical spectrum, from the baroque through to the late romantic. On leaving music college, after winning first prize as the most outstanding musician, he toured with the RPO playing the double bass. Later he was asked by Sir Thomas Beecham to become his assistant, and he is still a great Beecham admirer. 'I was very proud to be elected to follow Kempe as honorary President of the Beecham Society. His knowledge of style and phrasing has never been surpassed; he marked up his scores quite closely and I was able to study



them in the time I was with him'.

Following in-depth investigations into phrasing and operatic scores, Vaughan became involved in a long controversy regarding the scores of Verdi and Puccini, and the unauthentic markings introduced by successive copyists over the years. 'I eventually found more than 60 erroneous markings on every page. The result of this was many years' conflict, which, if I hadn't been a pig-headed Australian, I don't think I would have got through.' Though the eventual outcome of all this work will one day be relatively 'pure' editions of the Verdi operas, he is somewhat rueful over the matter as a whole. 'Unfortunately, as a result a lot of people began to think of me as a musicologist, which I am not. Also, the publishers are a very fine body, but they are a monopoly, and no theatre can afford to be on bad terms with them—so eventually I just had to let it drop.'

Musicologist he may not be, but he does have the background and knowledge to ensure that whatever he does conduct is in the correct style. Comments like: 'So many conductors in Verdi make all the excitement in the orchestra rather than in the singing—the real tautness of the Verdi line lies in the vocal part', show the sort of 'musicology' that really interests him. 'One mustn't become too specialized: orchestra and opera go side by side, they are complementary.' It is this sort of approach that allows him to make a record of clavichord music amongst his other recordings. He hopes to have his own opera house in Germany in the near future, and eventually do more work in the UK. 'These things take time,

Continued on page 88



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Quality Monitor

Re-assessment of recent 'star' quality recordings and re-ratings for some others; comments based on actual releases, not test-pressings. Following equipment employed:— Cartridges: Shure V15/III, Onlife Ultimo DV38/20B. Arm: SME 3009 Improved. Turntables: Thorens TD 125, Linn Sondek LP12. Amplifiers: Quad 33/303/405 and Pioneer SA-9900. Loudspeakers: Crabbe/IMF, Quad, B & W DM6/DM5, KEF 104, Spendor BC-1, BC-3.

The equipment used by the QM team is not claimed to be the best available, but should be representative of high quality hi-fi equipment.

OVER the years we have applied various rationales to induce some sort of order into the random collections of recordings gathered here. But this time we give up the pretence and propose simply to take our office check-list as a guide, which groups records roughly into the order in which QM copies arrived for assessment. This should at least add some variety to the proceedings!

Horacio Gutierrez made his HMV recording debut with Tchaikovsky's 1st. Piano concerto accompanied by André Previn and the LSO (ASD 3262 ④ September) and was, for his efforts, awarded with a qualified star rating by C. B. We wholeheartedly agree with the comments on 'an apparently endless dynamic range': climaxes are loud and exciting and yet every detail in the *pp* passages is audible (*and* quiet—no appreciable compression). The piano tone is exquisite, but although C. B. had reservations about the string tone *en masse* being weak, we think that the sound of the strings is one of the most lifelike we have heard—no 'giant' violins here—so we will up the rating to a pure [**A***].

In September S. D. praised Melkus' recording of Bach's Accompanied Violin Sonatas (BWV 1014–1019) on DG 'Archiv' 2708 032, and at the same time commented on the predictable and somewhat antiseptic performance. While acknowledging the star rating, it is perhaps true to point out that the recording also possesses a 'sanitized sheen', and is almost embarassingly gentlemanly in its retiring politeness. Rating confirmed, but the violin doesn't bite.

C. B. awarded [**A**/**A***] to Itzhak Perlman's collection of pieces by Fritz Kriesler (ASD 3258) in September. The recording has the gentle romanticism of much of the music and is soft without being veiled. There is a magic about the music and recording that would be appropriate to lazy Sunday afternoons, although it would be easy to doze before reaching Side 2! The record is effortless, natural and uncoloured. Rating confirmed.

The Wagner *Meistersinger* (soloists/VPO/Solti: Decca D13D5) double-starred in September, enshrines rewarding performances in an overwhelmingly musical recording. We were a little disheartened at the prevalence of (pressing or recorded) rumble on some sides, when played at realistic levels. Generally, though, surfaces not bad for a British product. Recording: the star is fully justified in consideration of all the warmth, smoothness and solidity the Sofiensaal team have brought to this vast contrapuntal canvas and, in particular, of what G. J. noted as the marvellous fine detail that leaps out from every scene. This can be well-exampled by the Act 3 (Side 9) 'Dance of the Apprentices' in which the successive glockenspiel and triangle accompaniment stand out from texture in every note and trill, whether separately or together. As described, indeed 'A triumph of the recording art'.

P. T. gave [**A**/**A***] to a collection of modern string quartet pieces—including works by Webern, Haubenstock-Ramati and Urbanner—played by Alban Berg Quartet (Telefunken AW 6.41994) in September. This rating is confirmed with enthusiasm, the recording possessing a live urgency which is most exciting. Some might find a tendency towards the clinical, but this is necessary to give the separation required by the complexities of this type of music.

'Skilful use . . . of stereo separation . . . tone both bright and warm . . . presence spacious and intimate . . . a number of irreconcilables reconciled.' Thus wrote H. O. in October when reviewing the stunning Philips version of Carl Orff's *Carmina Burana* (9500 040), featuring a German team and the Leipzig radio orchestra under Herbert Kegel. We fully concur, just adding that despite a highish recording level (which probably contributes to the remarkably low background on our copy), the sound is beautifully clean and unforced at all times, and fully worth its star.

Another excellent vocal/orchestral recording from provincial Germany is the new *Die Fledermaus* (DG 2702 088), in which Johann-Strauss II's tune-packed operetta is commanded by Carlos Kleiber in a performance by the Bavarian State Orchestra and opera chorus and a cast including Popp, Prey and Kollo. The closely balanced (but rounded) orchestral sound in the overture suggests the intimacy of a theatre rather than the openness of a concert hall, and indeed Alfred's initial off-stage voice and Adele's first entry place the singers behind the orchestra in real-life fashion. But later the vocalists move fore and aft with considerable freedom, at times seeming to come almost into the listening room—especially in dialogue passages, where the producer has chosen to use the recording medium for an intimacy rarely possible in the theatre. One effect of this is a certain incongruity of loudness/nearness for the performers, first when speaking and then when singing from what is supposed to be the same position.

Except on a very few fortissimo occasions when vocal passages are exceptionally loud, this is a strikingly clean recording, with good dramatic effects and consistently fine orchestral sound—within the confines of a smallish acoustic. It certainly deserves the star awarded by P. G. in October.

At our 1976 Audio Award presentation (see December issue), Richard Baker spoke admiringly of the Awardee's Wagner *Wesendonk Lieder* (ASD3260). Supported by an equally admirable Brahms *Alto Rhapsody* and four R. Strauss songs, all with LPO/Boult, Janet Baker is represented on this record (reviewed October) with an immaculate recorded sound of excellent EMI-style smoothness and clarity that contributes worthily to J. F.'s double star. Soloist and chorus (in *Alto Rhapsody*) nicely middle-distance in the best tradition, clean mellow orchestra.

Robert Tear shadows *the* Britten tenor in more of his special repertoire—now Canticles 1–3 of the five written to date, *My beloved is mine*, *Abraham and Isaac*, *Still falls the rain*. With James Bowman as Isaac and half of God, Philip Ledger on piano, HMV CSD3773 was rated [**A***/**A**] in October. We find the 'artifice' H. O. referred to, the distancing of God's voice, justified in context. For the rest, a forward sound of dramatic effectiveness and immediacy: the astringent sweetness of these remarkable soul-pictures conveyed excellently well for the gramophone. Despite the composer's expressed view against domestic sound reproduction, a record of this kind must do more for music of such intelligence than many performances. Warmly recommended. (See also p. 88).

The Decca recording of Debussy's *Nocturnes* and *Ibéria*, with Dorati conducting the National Symphony Orchestra and the Ladies of the Oratorio Society of Washington D.C. (SXL6742) was given an enthusiastic [**A***] by H. O. in October. We agree with his views on an impression of actual presence of the instruments; the recording is so natural that one gets absorbed in the *music*, and quite forgets the physical medium of the record and player. This must be the *raison d'etre* of sound reproduction, and the album deservedly gets its star.

Quite a contrast from *Leider eines fahrenden Gesellen* (Mahler, 1884) to Frank Martin's six *Jedermann* (Everyman) monologues of 1943. Fischer-Dieskau in both, with Bavarian RSO/Kubelik and BPO/Martin respectively (DG 2530 630, October). Both works are connected by death-orientation, and though the approach varies greatly, the results are in both cases well-served by the recording perspective chosen. J. F.'s double star is applauded. On the recording side, the voice comes over nicely between speakers, with orchestra spread cleanly around behind, across the full width. An exemplary balance to a sound of extreme smoothness and comfortable clarity.

It isn't our usual policy to cover re-issues in QM, but November's *Déjà Vu* actually moved one record from its original [**C**: **2**] rating up to [**A***: **1***] in its re-packaged version, and we have been taken to task for this. A range extending from 'good' [**2**] to 'outstanding' [**1***] may, we diffidently suggest, be a reasonable expression of varying

they go in cycles, but I certainly hope to do more work here in the future.'

Deryck Cooke (1919–1976)

We heard with sadness of the death of the distinguished writer and musicologist Deryck Cooke. For so many of us who attempt to wrestle with the deeper meaning of the musical mystery, and so often end up by being thrown out of the ring, his book *The Language of Music*, first published in 1959, was always a guiding light. In fact, there were probably few books on music which provoked so much discussion or were so often referred to. One might not agree with all the conclusions drawn but at least it was a bold attempt to drive a path of reason through an intangible forest.

He spent much of his working life in the music department of the BBC, from 1947 to 1959 and again from 1965 until his death. It is impossible to estimate his contribution there, but one senses that he must have exercised a knowledgeable and well-balanced influence that has had much to do with the BBC's



excellent contribution to our musical life over the years.

The general musical public will always associate his name chiefly with Mahler. He did a great deal to help the universal revival of interest and, with the composer re-established, his name was frequently found on programme and record sleeve notes on Mahler, guiding and illuminating with a nice mixture of enthusiasm and insight. To these he added a readable book on the subject 'Mahler 1860–1911' and, a task which ensures for his name an immortal place in the musical archives, produced his discerning performing versions of the incompleted 10th Symphony. This was an immense and difficult task perfectly executed. As a reviewer in *The Gramophone*, writer in various musical publications, as a broadcaster, as a man of wide culture, he will always be spoken of with great respect. P.G.

Benjamin Britten, 1913-1976

On December 4th last year, just twelve days after his 63rd birthday, Benjamin Britten died at his home in Aldeburgh.

England's major operatic composer since the 1945 premiere of *Peter Grimes*, Britten will be remembered as one of the greatest of all composers for voice. As well as having produced more works for children's voices than any other composer, he enriched the world's song-cycle repertoire with a number of major works, written mostly for his close friend and musical associate Peter Pears. A 'Music on Record' survey will follow in February.

In his tribute to Lord Britten, Sir Michael Tippett spoke of the 'apprehension' of friends at the final opera *Death in Venice*, in which the 'sense of death'—always one of the composer's dominating themes—is more sharply drawn than previously. Thomas Mann's autobiographical novel served as the foundation for Britten's most intensely personal operatic statement.

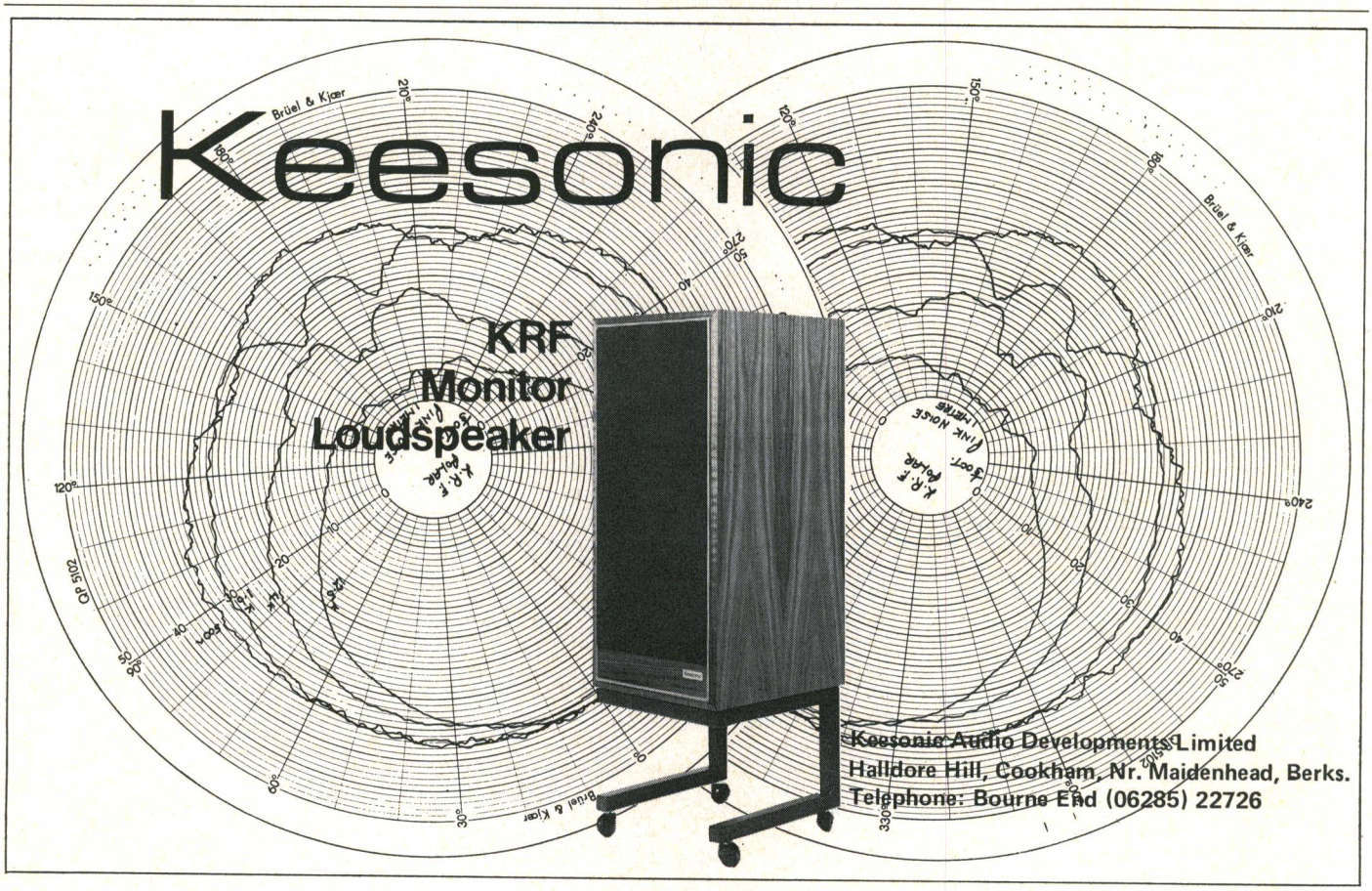
It was in 1973, while preparing *Death in Venice* for production, that Benjamin Britten was taken ill with the heart condition that was to end his life.

'Death, be not proud.'

G.J.

Scales from their Eyes

It seems that several music departments in schools and colleges have made use of John Crabbe's article *What's in a Scale?*, printed in the 1973 HFN/RR *Annual*. This examines the history, rationale and arithmetic of the scales employed in Western music, in a step-by-step survey occupying ten pages and including a comprehensive bibliography. We mention this because a quantity of 1973 Annuals have just come to light and there may be teachers and others who would welcome a copy of the article for research or study purposes. We would be happy to supply these Annuals for the cost of postage only (32p each): requests to the editorial office.



taste on the *musical* side, but we have listened with some extra pairs of ears to the *sound* of the Del Mar/RPO coupling of Elgar's *Enigma Variations* and the five *Pomp & Circumstance* marches on DG Privilege 2535 217. In his June 1975 review of the first version (on Contour), P. G. complained about the 'cavernous acoustic' of Guildford Cathedral which 'generally muddies the whole effect'. Never fond of excessive reverberation, P. G. allocated a 'moderate' sonic rating [**C**], but commented in passing that it 'should sound quite impressive on normal domestic equipment'. We see his point, but note that a touch of bass cut and treble lift can make it sound impressive even on very expensive equipment—especially if one is using rear speakers and Hafler circuitry, which give a fine feeling of immersion in an 'Albert Hall' acoustic. We understand 'D. J. V.' feeling impelled to award a star, but all things considered we suggest a compromise of [**A/B**].

With regret, the QM team must also disagree with H. S. (September review) and with P. G. (November *Looking Back*) regarding Bartok's opera *Bluebeard's Castle* as recorded on CBS 76518. Despite a notable performance under the direction of Pierre Boulez, good characterisation by the two singers, and fine orchestral sound from the BBC Symphony Orchestra spaciously presented for CBS by EMI's studio team, we feel that the vocal/orchestral balance here is neither credible nor attractive. Although the singers move around and are given a suitable quota of ambience, they are simply far too loud.

A brief snatch from the Kertesz/LSO version on Decca SET311 shows how much more readily the work may be absorbed when the vocal parts are more naturally balanced. Also, while the Kertesz recording is somewhat over-bright, it does have the virtue of real and effective organ pedals underpinning the orchestral chords representing Bluebeard's vast domain—revealed to Judith as he opens the fifth door. A great disappointment, and not in our view worth more than an overall [**B**] despite the original star rating.

While on the uncomfortable subject of down-ratings, J. C. has been listening again to the Davis and Frémaux versions of the Berlioz *Requiem*, each a very good recording in its own way, and on coming back to Bernstein's French version on CBS 79205 he feels that it wasn't altogether fair (November) to grant it the same [**A**] rating as its predecessors. Lacking quite the degree of ambience granted to the orchestra, the chorus has a slightly 'hard', unyielding quality at some climaxes. This is rounded and masked very effectively by rear speakers *à la* Hafler, but for simple stereo we reduce the rating to [**B**].

One more item whose re-assessment yields a minor down-grading: S. D. awarded a star to the recording of Gunilla von Barr in J. S. Bach's solo flute sonata in A-minor on BIS LP21, as part of a complex rating decending to [**C**] for some items on the disc, but in this instance a straight [**A**] rating would be more appropriate. Secure tracking has been ensured by a fairly low-level recording, but sadly there is some residual rumble which becomes rather more noticeable than is desirable when using large monitor speakers. It is also relevant to point out that the recording is set at some distance in a rather reverberant acoustic, which may not suit some.

The CBS boxed set of the Juillard Quartet performing Mozart's last four quartets (79204) was awarded a double star by K. D. in October. We agree with the rating; the quartet is ranged across two thirds of the sound-stage with the acoustic of an appropriately small hall behind, and the sound has a warm, natural quality without either excessive close-miking or reverberation. CBS have caught just the right balance: every musical strand audible but blending cohesively.

There's little one need say about the best Philips product except that it represents possibly the finest available in recorded sound. Surfaces too—as with no other company we can call to mind, except possibly DG—are generally impeccable. Tippett's Symphony 1/Suite in D (LSO/Davis) on 9500 107, double-starred by H. O. in October, deserves it thoroughly. A powerful sound, nicely middle-distanced, with detail clarity of the highest order on any part from soft to loud. And how loud! Splendid stamping bass solidity, limpid yet weighty textures at high levels without a trace of discomfort.

While admitting initial problems of unfamiliarity or even alienation when examining the collection of Kurt Weill's music (DG 2740 153) praised and starred by P. G. in November (perhaps Isherwood's pre-war Berlin is more familiar and acceptable to English palates) there is no denying the excellence of the recording. There is a just perceptible yet appropriate dimness in the sound, with very accurate imagery and detail shining through. The performance likewise is nearly immaculate, and if the music is to the taste—an acquired taste perhaps akin to a Fassbinder movie—this must be starred.

An [**A***] was awarded in November by P. T. to the Philips recording (9500 108) of two Brahms Sonatas for Violin and Piano, performed by Arthur Grumiaux with Gyorgy Sebok on piano. The sound is very natural, with an intimate ambience rather than a concert hall acoustic, and the piano and violin are extremely well recorded without excessive dryness from close miking. The image produced is that of two friends having a private conversation, neither one dominating the other, and this illusion is preserved by very quiet surfaces. Rating confirmed.

Granting a star for 'impact, presence and all-round effectiveness', H. O. noted in his November review of three Butterworth pieces and Britten's *Frank Bridge Variations* by Marriner/Academy on ZRG860 that the recording *could* strike one as 'a little theatrical'. The sound of the Academy of St. Martin-in-the-Fields as captured on disc does sometimes provoke suspicions of contrived perfection, but if there is any theatricality here in the achievement of brilliance without steely over-closeness, we have no grumbles and would keep H. O.'s star. The upper strings are often very bright in real life, and it is *that* sort of brightness captured here, together with a very fine overall balance of other orchestral departments and an excellently wide dynamic range—and what a fine work is Butterworth's *A Shropshire Lad*.

From the same performers (plus soloists and the Academy Chorus) and recorded by the same Argo team, Handel's *Messiah* on D18D3 also offers a brilliant clarity well suited to a modestly scaled quasi-authentic version of the work—double starred by V. McA. in November. This is *not* the sort of performance beloved of massed choirs in the Royal Albert Hall, with large orchestra plus mighty organ, but it does seem well suited to the stereo gramophone and permits one to hear every detail from singers and players carefully balanced in a spacious but not huge acoustic (St. John's, Smith Square). It is probably multi-miked and wouldn't suit Blumlein purists (Hafler speakers *don't* help), but the overall effect is extremely pleasing in the best Argo tradition. We were particularly struck by the effortless purity of reproduction of the two female soloists.

In his November review of the VPO/Abbado recording of Tchaikovsky's Symphony No. 4 (DG 2530 651), C. B. noted that the sound was in some respects worthy of a star, but felt that despite many excellences the overall rating should be qualified to [**A*/A**] because the balance seemed a little too distant even at high replay levels. We see his point, but everything is nevertheless so consistent, clear, clean and brilliant, with such a widely effective dynamic range and beautiful use of stereo, that we would upgrade to a pure [**A***] were it not for some lack of fullness in the extreme bass. Our reviewer remarked on 'an unusually faithful rendering of the low orchestral registers', but big climaxes seem even more realistic with a little boost in the bottom octave. Our pressing was so free of rumble (and very quiet generally) that this gave no difficulty. So, rating confirmed.

Haitink's recording for Philips of Mahler's *Das Liede von der Erde* was given a mere [**A**] rating by C. B. (6500 832, October) because of unsuitable close miking given to James King's already dry, slightly hollow tenor, and a slight tendency for both King and Janet Baker to appear more forward than in concert hall experience. Repeated listening, however, has made us realise how excellent is the *orchestral* recording: the swoops and swirls in 'Trinklied', for instance, carry you with them and deposit you breathless with King at the final bass chord. The dense, layered texture is made beautifully transparent with every strand clear, especially with a Hafler set-up, and is exemplified in the 'bolting horse' middle section of 'Von der Schönheit' where the brass instruments, although realistically loud, in no way obscure the detail in the woodwind or strings. The long orchestral interlude in 'Der Abschied' is breathtaking—rarely have clarinets been so melancholy, and when the basses take the descending trill figure against low brass, every note comes through, with no obscuring boominess. A star, therefore, for the quality of the orchestral recording, giving [**A*/A**].

QM Footnote: Fresh samples of the Decca Ring Cycle cassettes affected by dimness on our review machine (see QM, October 1975) have cleared up the problem. This convinces us that the dimness encountered on initial samples of these three cassettes is a random occurrence, probably due to minor azimuth mismatching between some copying machines and some domestic equipment, remediable by replacement of affected cassettes.—**GJ**

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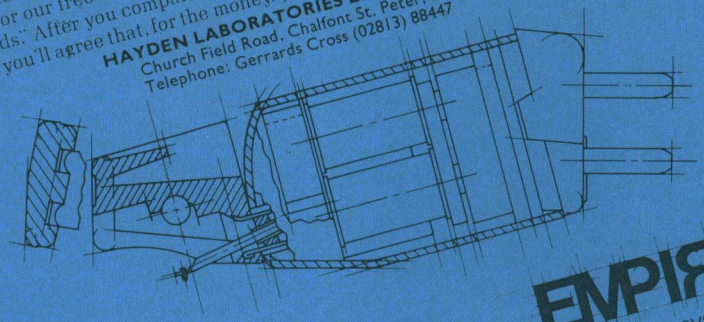
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FREQUENCY RESPONSE	10Hz-50KHz ± 3 db	15Hz-50KHz ± 3 db	15Hz-45KHz ± 3 db	20Hz-20KHz ± 1 db	20Hz-20KHz ± 2 db	20Hz-20KHz ± 2 db	20Hz-20KHz ± 3 db	20Hz-20KHz ± 3 db	20Hz-20KHz ± 3 db
TRACKING FORCE RANGE	¾-1¼ gm	¾-1½ gm	1-1¾ gm	¾-1¼ gm	¾-1½ gm	¾-1½ gm	1-2 gm	1¼-2½ gm	1½-3 gm
SEPARATION:									
15Hz to 1KHz	28 db	26 db	24 db						
1KHz to 20KHz	23 db	21 db	20 db						
20KHz to 50KHz	15 db	15 db	15 db						
20 Hz to 500Hz				20 db	20 db	20 db	18 db	18 db	16 db
500Hz to 15KHz				30 db	28 db	25 db	23 db	23 db	21 db
15KHz to 20KHz				25 db	20 db	18 db	15 db	15 db	13 db
I. M. DISTORTION @ 3.54 cm/sec	.2% 2KHz-20KHz	.2% 2KHz-20KHz	.2% 2KHz-20KHz	.08% 2KHz-20KHz	.1% 2KHz-20KHz	.15% 2KHz-20KHz	.2% 2KHz-20KHz	.2% 2KHz-20KHz	.2% 2KHz-20KHz
STYLUS	.2 mil bi-radial	.2 mil bi-radial	.2 mil bi-radial	.2 x .7 mil elliptical	.2 x .7 mil elliptical	.2 x .7 mil elliptical	.2 x .7 mil elliptical	.3 x .7 mil elliptical	.7 mil radius spherical
EFFECTIVE TIP MASS	.4 milligram	.4 milligram	.4 milligram	.2 milligram	.6 milligram	.6 milligram	.6 milligram	.9 milligram	1 milligram
COMPLIANCE	30×10^{-6} cm/dyne	30×10^{-6} cm/dyne	30×10^{-6} cm/dyne	30×10^{-6} cm/dyne	20×10^{-6} cm/dyne	18×10^{-6} cm/dyne	17×10^{-6} cm/dyne	16×10^{-6} cm/dyne	14×10^{-6} cm/dyne
TRACKING ABILITY	32 cm/sec @ 1KHz @ 1 gm	32 cm/sec @ 1KHz @ 1¼ gm	30 cm/sec @ 1KHz @ 1½ gm	38 cm/sec @ 1KHz @ .9 gm	32 cm/sec @ 1KHz @ 1 gm	28 cm/sec @ 1KHz @ 1¼ gm	28 cm/sec @ 1 KHz @ 1½ gm	28 cm/sec @ 1KHz @ 1¾ gm	32 cm/sec @ 1KHz @ 2 gm
CHANNEL BALANCE	within 1 db @ 1KHz	within 1 db @ 1KHz	within 1½ db @ 1KHz	within ¾ db @ 1KHz	within 1 db @ 1KHz	within 1¼ db @ 1KHz	within 1½ db @ 1KHz	within 1½ db @ 1KHz	within 1½ db @ 1KHz
INPUT LOAD	100K ohms/ channel	100K ohms/ channel	100K ohms/ channel	47K ohms/ channel	47K ohms/ channel	47K ohms/ channel	47K ohms/ channel	47K ohms/ channel	47K ohms/ channel
TOTAL CAPACITANCE	under 100 pf/channel	under 100 pf/channel	under 100 pf/channel	300 pf/channel	400-500 pf/channel	400-500 pf/channel	400-500 pf/channel	400-500 pf/channel	400-500 pf/channel
OUTPUT @ 3.54 cm/sec	3 mv/channel	3 mv/channel	3 mv/channel	3 mv/channel	4.5 mv/channel	4.5 mv/channel	7 mv/channel	7 mv/channel	7 mv/channel



The Making of Instrument Makers

John Atkinson visits the London College of Furniture

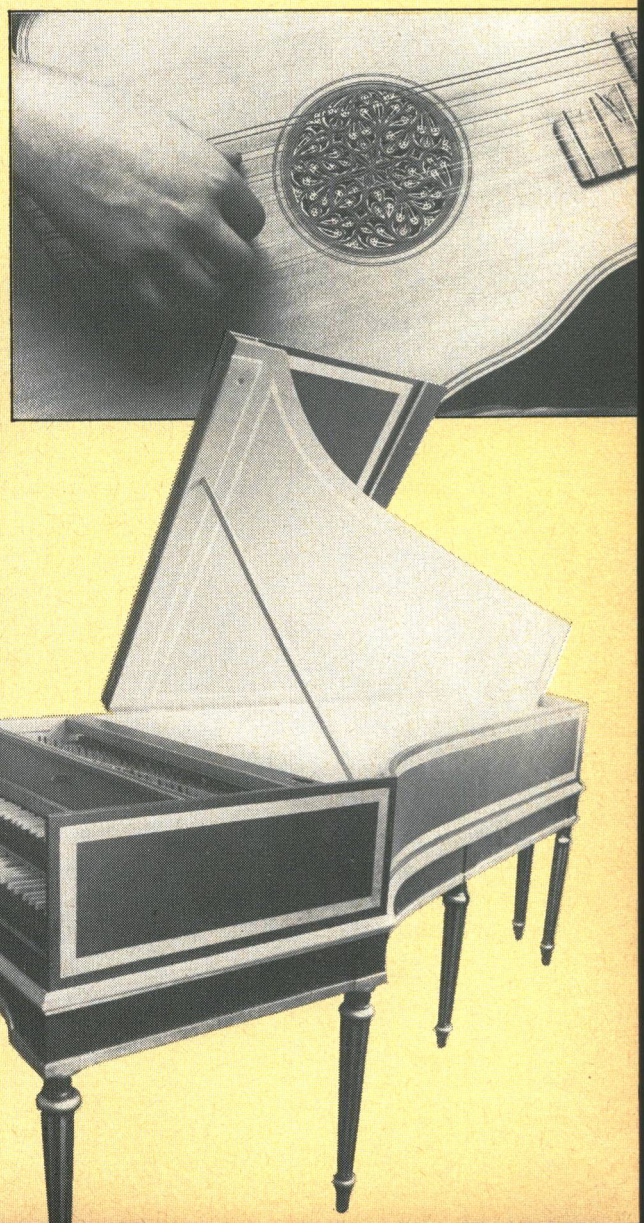
THE London College of Furniture in the heart of the East End has an extremely unusual Department of Musical Instrument Technology, which is gaining a reputation as a training ground for instrument makers. The Head of the Department, Mr. P. L. Shirtcliffe, explained the organisation and showed me around the Department, which is divided into six workshops. The piano shop, piano design being a static art, concentrates on training students in piano repair and renovation, and also trains the majority of piano tuners in the UK. Similarly, in the violin workshop students are given a three-year course in traditional violin making methods, and by the end of the course produce a string quartet to standard designs. The electronics lab perhaps would be of most interest to hi-fi enthusiasts, where students study the design of synthesisers, amplifiers and loudspeakers, and also gain experience in recording techniques; it is envisaged that the course would be a suitable training for studio engineers.

The College does a lot of work with early instruments and there are three workshops for keyboards, wind and fretted instruments. Guitar oriented students work for a year in the modern fretted shop where they produce a classical guitar. They then elect to stay with modern instruments or to change to early fretted instruments such as the viol, lute or cittern (a wirestrung lute-like instrument). In the keyboard and wind shops, students start straight away on the early instruments, and the aim is to produce instruments made completely in the College from the basic raw materials, everything from strings, wrestpins, keys and reeds being made by students. In all the early instrument courses, both students and tutors (who include luthier Ian Harwood) spend a lot of time measuring instruments in museums and private collections in order to produce accurate plans for reproductions, and the College is building up a large information bank of plans of historical instruments from all over Europe. In fact, the College is one of the few places that doesn't have to make instruments for commercial gain. They can therefore make an interesting historical instrument and then offer it to a professional musician such as Anthony Rooley or Colin Tilney (who both have good working relationships with the College) who can then see how this compares with reproductions of standard instruments. The Department can therefore be in the forefront of research into early instrument reproduction. ●



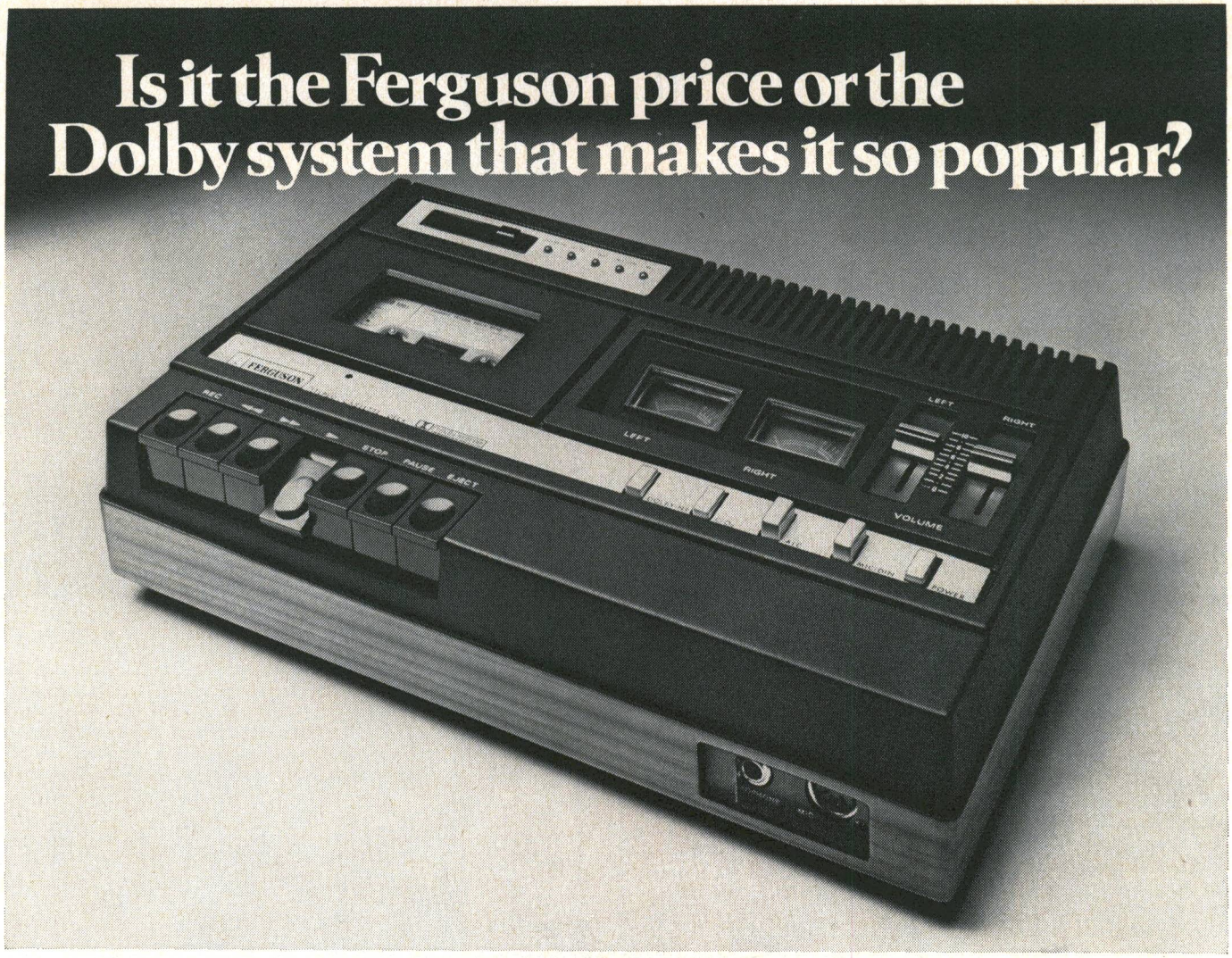
Students blowing their own curtals: we realise that this picture is printed the wrong way round, but of course early wind instruments can be played either way. (Note Fishtail key)





Top left—One of the first treble viols made at the College
Middle left—Fretted instrument students with left to right, lute, bandorra, viol
Middle right—Intricate fretwork on the rose of a bandorra
Bottom right—Reproduction harpsichord finished in gold leaf

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Things I Hear Arthur Jacobs

AMAZING to think that Leon Goossens' recordings of the Elgar *Soliloquy* (see Gramophile, p. 83) was made last summer, when the oboist was already 79. It was an equal surprise to find, when I visited Goossens recently at his West London home, that he still plays on the instrument made for him in boyhood in 1907. He handed it to me: it is a considerably lighter instrument, carrying less complicated metal key-work, than younger professionals use.

A career which began in 1913 embraces the memory of many famous conductors including Elgar himself. The recording of *Froissart* which Elgar conducted (reissued in that remarkable *Elgar on Record* collection of six records, HMV RLS 713) contains a passage of Goossens' playing which particularly delighted the composer. The great Beecham/London Philharmonic discs of the 1930s are distinguished by his tone: I recall from my childhood the Delius *La Calinda*. Goossens is still giving recitals up and down Britain. It is surely odd that no concerto appearance with orchestra, and no special recording, seems yet to have been arranged for his 80th birthday next June. He cherishes a regret that the music of his brother, Eugene Goossens (including an oboe concerto written for him) seems to have disappeared almost completely from public view.

ELISABETH SCHWARZKOPF, for whom Walton originally designed the heroine's role of his opera *Troilus and Cressida*, never sang it on stage. But she took part, memorably, in a two-disc 'highlights' set with Richard Lewis, the original Troilus. EMI's failure to reissue the set for this season's revival at Covent Garden was perhaps explained by the announcement in the theatre's programme that the opera in its new version was being recorded 'live' (again by EMI) in performances from Covent Garden itself. Presumably, as with Wagner from Bayreuth, a composite tape will be made of the best from many takes.

The new version is Janet Baker's, the heroine's role having now been re-set by the composer for mezzo-soprano—and a few other alterations having been made too, as may be seen in the new libretto (OUP, £1·25). Dame Janet and Richard Cassilly carried the leading roles impressively on the opening night, at least in their vocal representation, strongly supported by Lawrence Foster's conducting. Scenically it all suggested an economy drive after the notorious £3400 dragon for *Siegfried*.

A few nights before, I noticed Walton in the audience for the opening of Ginastera's *Bomarzo* at the Coliseum. (This opera too exists on a 'suppressed' recording—in Spanish, by the opera company of Washington, D.C., which gave the first performance.) In its construction in 15 short scenes with orchestral interludes it recalls Berg's *Wozzeck* and not to the advantage of the new work, where superficial modernities such as a chorusing of pure consonants do not convince me of deeper worth. The arduous tenor title-role, capably sustained by Graham Clark, provides an obvious question for someone's next musical quiz: Who is opera's hunchback other than Rigoletto and Dick Deadeye—and with a different voice too?

'THE SLOW movement—which is very bare, severe and extremely slow—has been called by the Israelis very Israeli in flavour and by Italians, very Italian in flavour. I am very proud that it is the first piano concerto ever played by the Lusaka Symphony Orchestra in Zambia, with myself as the soloist and the conductor being the first horn-player, who was in the last months of pregnancy at the time of the performance.'

Author and composer (or did you guess?): Malcolm Williamson. He was pianist and programme-annotator for his own Piano concerto No. 2 at a recent concert in the London Mozart Players' series, 'Composers' Choice' in the Queen Elizabeth Hall. Yuval Zaliouk, the Israeli conductor who has already made an all-Williamson record (EMI EMD 5520), was in charge, and an obvious candidate for a new record is the Williamson harp concerto given its premiere on this occasion with Martine Geliot as soloist.

Looking Back Peter Gammond

IT is easy to understand why a first-night audience at, let us say, *The Rite of Spring* should be puzzled and perturbed, even downright hostile. There is a score that even today remains a challenge to the ultra-conservative musical mind, and those suffering from metrophobia. But it is difficult to see how those audiences of the time, given the inestimable privilege of a first-hearing of works like *Die Fledermaus* or *Carmen*, failed to see them as unquestionable masterpieces. I can remember saying that I didn't think much of *The Sound of Music* when I first heard it, and soon saw it mushrooming to popularity. As a matter of fact I still think it one of Richard Rodger's worst scores, but that only shows how we critics can be out of step with the public. But *Carmen*—I'm sure I should have leaped from my seat on that first night wildly cheering—how could *anyone* have failed to see its quality? And what an eternal pity that poor Bizet should not have lived to see it properly acclaimed!

It is interesting, and perhaps natural, that works like *Carmen* which arouse most controversy should suffer (or gain, maybe) from such conflicting interpretative viewpoints. The prima donnas have tried their every allure to prove that they were the most seductive of Carmens. Conductors have interpreted like mad—with Bernstein almost standing on his head to achieve different and unquestionably interesting results. For many there is no need, still, to look further than the truly Spanish Carmen of Victoria de Los Angeles, ably abetted by a swaggering Beecham, yet one has always found it difficult to recommend one version without reservation. To say that the new Solti (Decca D11D3) proves a safe recommendation may make it seem a little unexciting; but it is, in fact, far from that. To begin with, as you would expect, the orchestral side of things is stupendous, and overall we end with an exciting and colourful view of the whole opera. The recording is of a high standard without quite reaching star quality owing to a slight and uncharacteristic reticence—on disc. The cassette is of much greater brilliance. The Carmen is more than adequately handled by Tatiana Troyanos; altogether a highly satisfying experience.

The other opera I have listened to this month is, apart from one delectable aria, much less familiar—Charpentier's *Louise* (CBS 79302). Poles apart from the international *Carmen*, *Louise* is totally French, specifically as Parisian as that lady at the bar of the Folies Bergère. And yet, paradoxically, because of its down-to-earth reality, its lack of the usual operatic absurdities, *Louise* takes some getting to know. It grows on you: the atmosphere, the language, the emotions, grow on you, just as one becomes increasingly French in outlook after a few days in Paris, the most wonderful city in the world still. In fact, the only limitation of *Louise is* that you couldn't possibly like it unless you were a sympathetic lover of the French. Perhaps I go too far—you could like it but not enjoy its full flavour. It has certainly begun to worm its way into *my* affections.

Twice during the past year I have heard John Georgiadis playing, firstly with his Johann Strauss Orchestra in Plymouth, secondly with his delightful wife in 'gypsy' style music at the recent, and greatly enjoyable, gramophone weekend among our good friends in Torbay. It reminds me that this fine violinist, recently recalled to the leadership of the LSO (with time off for solo appearances) has, so far, not been properly exploited on record. There are plans afoot to put this right. Meanwhile I have been listening to the Mozart and Michael Haydn Duos for Violin and Viola (Abbey PHB742/3 with Brian Hawkins on viola) that were first published in 1974. We missed them on first release, so make amends by pointing out these two scholarly yet very enjoyable discs. While on the subject of Mozart, there is another of those delightful cultural cocktail hour records of wind band arrangements—*Die Entführung* coupled with Beethoven's *Fidelio* from the London Wind Ensemble (Decca SDD485). Very pleasantly unserious. And there is a satisfying recital of Mozart arias from the very charming and versatile Stuart Burrows (Oiseau-Lyre DSL-013) which I can thoroughly recommend. At one time we used to get quite a lot of these recital discs, but now they seem comparatively rare. I wonder why.

COUNTRY INTO ROCK

In which Fred Dellar seeks to discover the dobro connection

WHEN I was a Saturday morning cinema-goer, Roy Rogers was my imperfect hero.

While he sat astride Trigger and chased the baddies, all was well with the world. But it worried me that he spent far too much time kissing Dale Evans or singing sentimental songs that held up the action more than somewhat.

Then too there was the problem of that group who always sat around the camp-fire the night before the final shoot-out. Armed with nothing more than a couple of guitars, a can of beans and an interminable number of songs about ranges, dawgies and virginal gals from strange sounding towns, their presence was enough to ensure a 'U' certificate for even the most corpse-littered reel of gun-play.

From the screen credits I learnt that the group were called The Sons Of The Pioneers, originators of such hits as *Cool Water* and *Tumbling Tumbleweeds*. They seemed to turn up everywhere.

Here in '76, things don't appear to have changed *that* much. Today it's the violence of rock music that's being tempered by country-tinged offerings emanating from myriad, stetson-hatted musicians. Though nowadays they come equipped with more instruments than the Sons Of The Pioneers could ever hope to have afforded—even after collecting their usual haul of reward money. And most of the names too, still have a familiar ring to them—names like New Riders Of The Purple Sage, Shylo, Ozark Mountain Daredevils, Country Gazette and The Outlaws. All of them indicative of how the West was won.

Now one could be forgiven for imagining that the rock world had just discovered the wardrobe room at Republic Pictures—but the fact of the matter is that rock and country have rarely been more than a horseshoe's throw apart. For—tracked right back to the end of the trail—rock is just an offshoot of the blues . . . and the legendary Jimmie Rodgers, country music's first real superstar, was nothing if not a bluesman, cutting his million-selling *Blue Yodel*, basically a 12-bar, as early as 1928.

There were many such examples of country/blues crossovers during the early '20s and '30s, some record companies even bracketing the categories together in their catalogues. In Louisiana, blues and country intertwined even further with traditional French songs and even jazz being added to produce Cajun music, a form that owed something to everything but still stood as a separate entity.

Then came Western Swing, a hybrid dreamed up by country musicians who, in their way, sought to emulate the sounds of such as Fletcher Henderson or Benny Goodman, but utilising fiddles instead of trumpet breaks, or having accordions play riffs that Basie might have offered to his sax section. And while Shaw and Goodman pushed the clarinet to the fore, the undisputed king instrument of Western Swing was the steel guitar.

The influence of Hawaiian musicians had pervaded both blues and country music at a very early stage, blues musicians using bottlenecks in order to create a Hawaiian effect, their country counterparts attempting to achieve similar sounds on high-strung, steel-stringed instruments, the ultimate in this line being the dobro, a guitar with metal resonators. When the electric guitar came into use during the late '30s, the Western Swing bands saw this as the answer to all their problems and it wasn't long before it became an integral part of most aggregations playing in the genre.

From the most successful Western Swing units, like those of Spade Cooley, Bob Wills and later, Hank Thompson, it was but a short haul to rock. The boogie pianists, the drummers playing on the off-beat, the country-oriented electric guitarists were all set for the big commercial breakthrough.

It was only fitting that the remarkable Hank Williams should prove to be something of a catalyst. Generally accepted as country music's greatest songwriter, he'd learnt his music from a black street singer known as Tee-Tot. A rebel, an alcoholic and a pill addict, Williams wrote songs that bridged generation gaps and race barriers. From early 1949, when his *Lovesick Blues* went to No. 1 on the pop charts, until his death (from a claimed heart-attack) in the back of his car, on New Year's Day, 1953, Williams' records were hardly out of the top ten. A new generation weaned on the Williams songs and legends began to edge its way forward.

In 1954, a young country singer named Elvis Aaron Presley could be found appearing on the *Louisiana Hayride* show, while in Germany, an airman called Johnny Cash was strumming the first chords on a newly bought guitar. Then there were the others—like Don and Phil, the sons of country artists Ike and Margaret Everly; a 21 year-old pianist from Louisiana named Jerry Lee Lewis; and Charlie Rich, who came from a farm community in Arkansas. They and many others headed for Nashville and Memphis, gaining record contracts and emerging with a sound that crossed rhythm and blues with echoes of hillbilly. The result was christened rock-a-billy, though in truth it was hardly far removed from the formula used by Tennessee Ernie Ford on his pop-country-boogie hits (*Shotgun Boogie*, *Blackberry Boogie* etc.) during the early '50s. Just one more piece was required to fit the jigsaw. And this too was supplied by country music in the shape of a band known as The Saddlemen.

Led by guitarist William John Clifton Haley, they'd begun playing C. & W. songs during the '40s. Changing their name to The Rockets, they began recording Ford-like foot-tappers such as *Rock The Joint* and *Rocket 88* in 1952, becoming more R. & B. oriented after their recording of *Crazy, Man, Crazy* gained some attention during that year. So they settled down to become a kind of non-thinking man's Louis Jordan, watering down black music and adding the more commercial rock-a-billy beat. When in 1954 they applied their formula to bluesman Joe Turner's *Shake, Rattle And Roll*, it was all over bar the shouting.

And so it was that the sound of Haley, Presley and Lewis became the music of the younger generation, the teenager's weapon with which to drive Eddie Fisher from the air-waves. Deejay Alan Freed dubbed it rock 'n' roll, everybody started Twisting—and for a while, country music got forgotten in the rush.

But when the initial furore was over, rock found that it could not live on excitement and teen-dreams alone. For some the solution was to create something more complicated, to draw from classical influences, to reach out for abstracts. For others it meant a search for the roots once more, many—like the Rolling Stones, Animals and Yardbirds—initially recycling the blues. However, in the States, there were others who looked to country music for the great panacea. Among the first upon the scene were the brothers Rod and Doug Dillard, who'd learnt to play Bluegrass, the traditional banjo and guitar dominated music of the Appalachian region, during their school years. After playing the coffee house circuit for a while, they signed an Elektra recording contract in 1963 and began to obtain gigs in more major venues and on folk festivals. Around the same time The Hillmen, another youthful outfit formed by mandolin-player Chris Hillman and the guitar and bass-playing Godin Brothers, were busy recording a Bluegrass album in California. Looking back, it's amazing to think that perhaps some sixty per cent of today's main-name country-rock bands have a link, either direct or indirect, with these seminal units. Which, I suppose, goes to prove what an incestuous scene the whole country-rock syndrome is.

It was Chris Hillman who went on to become a founder-member of the Byrds, a band initially out of the folk-rock closet and heavily influenced by Bob Dylan. And though



Photo of Willie Nelson by Tom Sheeham (CBS Records)

scores of good country-rock bands sprang into being during the mid-sixties, it seems on reflection that it was the Byrds' *Sweetheart Of The Rodeo* album, released in 1968, that heralded the first major breakthrough for Opry-rock, the record that provided the impetus for so many others to dabble on dobro or pick up a pedal steel.

Rodeo had taken shape after guitarist Gram Parsons joined the Byrds' ever-fluctuating ranks, bringing with him know-how gained with his previous band, a group of L.A. cowboys known as International Submarine Band. Under Parsons' influence the Byrds began recording material by country writers like Merle Haggard and the Louvin Brothers (though they still included Dylan material, just to be on the safe side!). And on gigs they began using 'guests' such as Sneeky Pete Kleinow, a 23 year-old veteran pedal steel guitarist, and Doug Dillard, who played electric banjo with the band on their fleeting British visit in May, 1968.

But life with the Byrds was ever turbulent and it came as no surprise when Parsons and Hillman quit to form their own band together with Kleinow, bassist Chris Ethridge and drummer Jon Corneal (later replaced by Byrds' Mike Clarke). Attired like bespangled dudes in genuine C. & W. Nudie suits, the band—named The Flying Burrito Brothers—went into the studios during '68 and produced *The Gilded Palace Of Sin*, a scintillating amalgam of rock and country sounds, recorded before the band hardly spent any time together—which is why it probably came out sounding so totally fresh.

At that time, the rock world was beginning to reel under the onslaught of the first brass-rock units—Blood, Sweat and Tears, etc.—but there were those who opined that it was the Burritos who were really heading the right way. Bob Dylan was one such believer. In a 'Rolling Stone' interview he named the band as his favourite rock group, saying 'Boy, I love them, their records really knock me out.'

And when the next Dylan album was released, it proved to be a total country affair. Called *Nashville Skyline*, it'd been recorded in the Music City using the cream of country sessionmen, Charlie McCoy, Pete Drake and Kenny Buttrey. The songs bore titles like *Nashville Skyline Rag* and *Country Pie* and though one early Dylan composition, *Girl From The North Country*, was included, this new version proved to be a duet with none other than Johnny Cash.

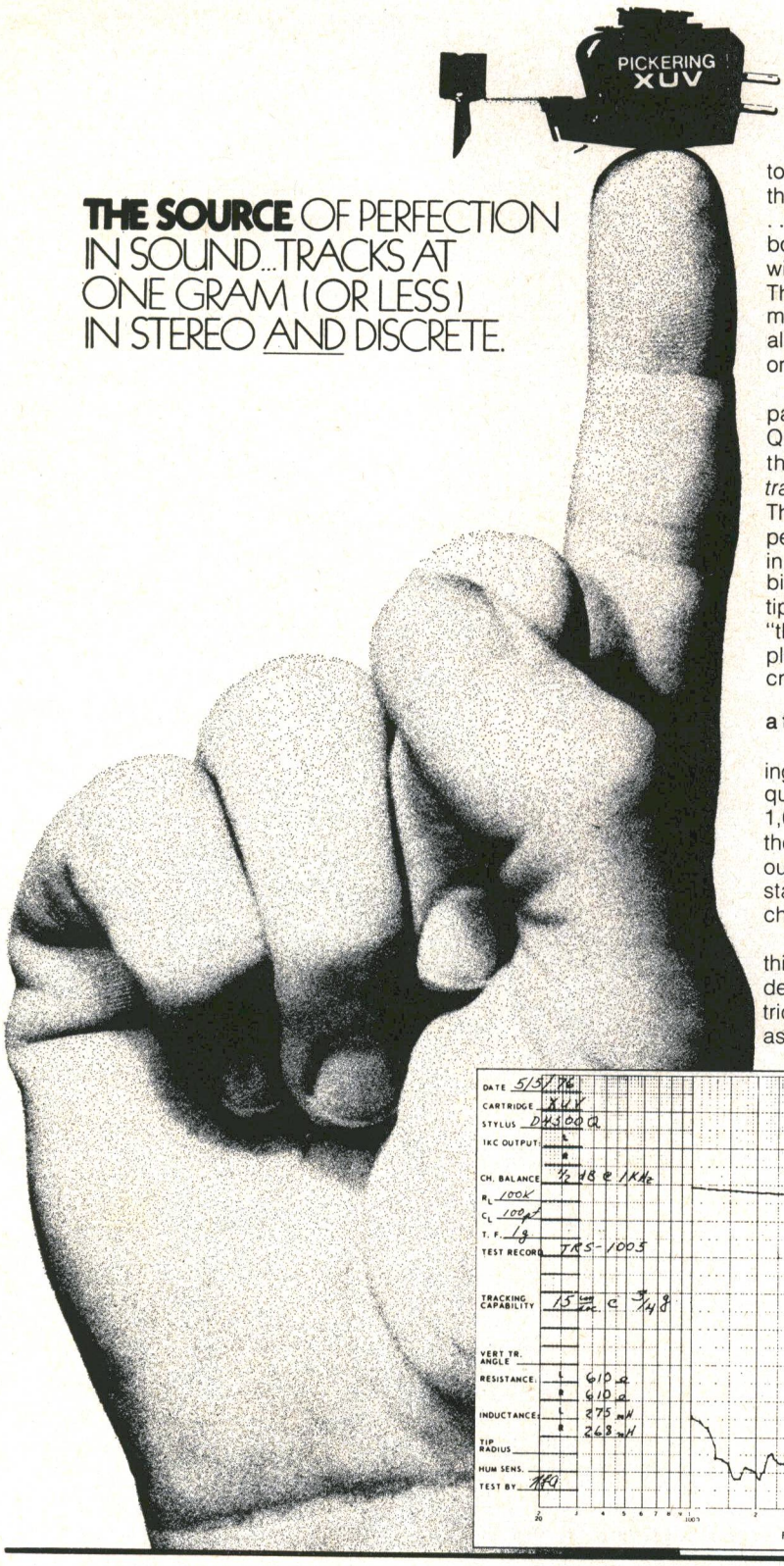
Nashville Skyline was a brilliantly conceived album. Probably the most commercial thing that Dylan had ever done, it was seemingly well received by the majority of the critics, who also handed out a fair number of plaudits to the musicians involved. It was only logical then that the *Skyline* sessionmen should form their own band, at least for recording purposes, and this they did, calling themselves Area Code 615 and cutting two excellent albums, *A Trip In The Country* and *Area Code 615* for Polydor during 1969–70.

However, Area Code could never become a regular band, all its members were top flight sessioneers and could earn far more money backing the influx of name artists who utilised the town's many studios. One member, Wayne Moss—who owned his own studio—attempted to carry on the Area Code tradition via an offshoot band, Barefoot Jerry, but this unit suffered several changes of both personnel and labels until, in 1975, everything seemed to click into place and Jerry emerged with a high selling album for Monument titled *You Can't Get Off With Your Shoes On*.

But Area Code were only one of the 'new wave' bands to emerge in the late '60s. In L.A. cosmic cowboys were being hastily signed by every record label. Hearts And Flowers, a band featuring a guitarist named Bernie Leadon, signed for Capitol, Leadon later joining Dillard and Clark, another enterprise headed by the ubiquitous Doug Dillard. Eventually Dillard changed the name of his band to the Expedition, then, in 1971, decided to opt out, at which point the Expedition became Country Gazette and yet another monicker appeared on the country-rock roster. Meanwhile Leadon, not to be outdone by the to and fro-ings of Dillard, had become a member of the Flying Burritos but, after a stay of two albums' duration, met up with members of singer Linda Ronstadt's backing band and thus was born a potential supergroup—The Eagles.

It's interesting to remember that the decorative Ms. Ronstadt—who today, along with Emmylou Harris, is thought of as a very fine contemporary country singer—originally worked with a folksy group known as the Stoneponeys. But she's hardly the first to switch sides—after the classic rock and roll era came to an end, sometime rockers like Jerry Lee Lewis, Rick Nelson, Charlie Rich, Brenda Lee and Conway Twitty all discovered that C. & W. could provide an acceptably healthy bank-balance. And even Mike Nesmith, a teenage idol of the '60s with the Monkees, subsequently moved into country, forming his own quite excellent band and running his own C. & W. record label. Many name rock bands have also been enormously influenced by the great revival. When Buffalo Springfield finally disbanded in 1967, members Richie Furay and Jim Messina went on to form Poco, a band featuring the steel

continued on page 97



THE SOURCE OF PERFECTION IN SOUND...TRACKS AT ONE GRAM (OR LESS) IN STEREO AND DISCRETE.

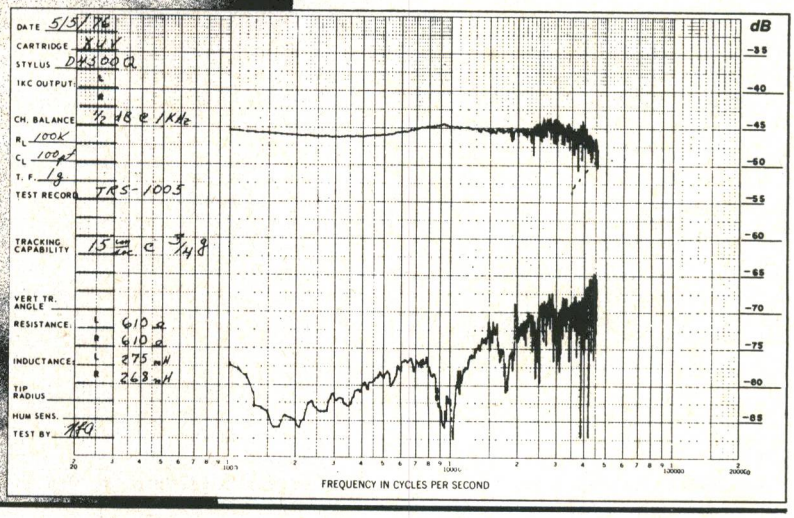
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a typical curve of the XUV/4500-Q

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Ozark Mountain Daredevils

guitar and dobro playing of Rusty Young. The Grateful Dead too have more than once nodded in the direction of Nashville, leader Jerry Garcia's *Old And In The Way* LP, recorded on the Dead's own Round label, being a classic item in the bluegrass tradition.

But continuing with such a listing would merely be pointless—half the bands in rockdom have recorded country material at some time or another—even the Beatles cut *Act Naturally*, a Buck Owens hit, way back in '65, Ringo heading for Nashville to make an album immediately after becoming a solo entity, Paul and Linda Mac cutting sides in the city during 1974, using the pseudonym Country Hams.

Perhaps then, it's more relevant to speculate on what has happened to country music itself as a result of its exposure to a whole new audience.

One thing has been a certain dissatisfaction with Nashville, which, because of its status (headquarters of the CMA; venue for Grand Ole Opry, country music's greatest showcase; central C. & W. recording point for such majors as MCA, RCA etc.) has acquired an establishment image, indicative of big business and totally unacceptable to many of today's stars. Which is why so many now choose to work out of such places as Bakersfield, California, or, perhaps more importantly, Austin, Texas.

It is from Austin that a new, tougher, more forward aspect of country music is developing, the revolution being headed by such self-confessed musical renegades as Willie Nelson; Kinky Friedman, leader of outrageous group the Texas Jewboys; Waylon Jennings and his wife Jessi Colter. One member of the fraternity, Johnny Paycheck, has become so disenchanted with the Tennessee scene that he now records under the name of John Austin Paycheck; while Steve Frumholz, like B. W. Stevenson, Jerry Jeff Walker and *Wildfire* hit-maker Michael Murphey, one of the town's fine singer-songwriters, is currently haranguing Music City with such lyrics as: 'You try to put Nashville in a nutshell/it's a hard-sell town where the dollar is the king/When you're broke and drunk and standin' in the rain/Nobody really cares how well you can pick and sing/It's who you know and what you say to the record man.'

Paradoxically, while Austin appears to be the area likeliest to shape the face of country music during the coming years, it's also the place where nostalgia has found a whole new host of believers. It's from Austin that such youthful bands as Commander Cody's Lost Planet Airmen (a unit which may or may not be defunct right now) and the equally unwieldy Asleep At The Wheel (up to an 11-piece at the time of writing) have set out to revive memories of Bob Wills and Western Swing, employing elements of R & B, Cajun music, honky-tonk and straight, down-the-line, cry-in-your-beer balladry.

So it seems that country music has to some extent managed to turn the full circle and it's possible that, in the not too distant future, someone like Eric Clapton will be recording Jimmie Rodgers' *Blue Yodel* in a contemporary version.

And if you think that's unlikely then remember that the Dirt Band have already re-cut the old Carter Family classic, *Will The Circle Be Unbroken*?, using a line-up that included such country greats as Roy Acuff, Maybelle Carter, Doc Watson, Merle Travis and Earl Scruggs, the result forming part of a triple-album that sold somewhere around a million copies.

Now that's something that would *really* have seemed incredible not so long ago! ●

SELECT DISCOGRAPHY

Although any such discography is subject to the whims of recording companies—who seem to delete albums more often than 'She Wore A Yellow Ribbon' appears on our TV screens—it is hoped that the discs listed here *will* be obtainable from your local record retailer.

Jimmie Rodgers 'Famous Country Music Makers' (RCA DPS 2021)
Hank Thompson 'The Country Sounds Of . . .' (Music For Pleasure MFP50301)
Hank Williams 'Live At The Grand Ole Opry' (MGM 2353-128)
Various reissues by *Sun artists* on the Charley label.
Byrds 'Sweetheart Of The Rodeo'/'Notorious Byrd Brothers' (CBS 22040)
Flying Burrito Brothers 'Close Up The Honky Tonks' (A & M 63631)
The Dillards 'Country Tracks' (Elektra K52035)
Bob Dylan 'Nashville Skyline' (CBS63601)
Area Code 615 'Area Code 615'/'A Trip In The Country' (Polydor 2683 040)
Barefoot Jerry 'You Can't Get Off With Your Shoes On' (Monument MNT 80695)
Dillard And Clark/Burritos 'Grass Roots' (A & M AMLB 51038)
Eagles 'Desperado' (Asylum K53008)
Linda Ronstadt 'Heart Like A Wheel' (Capitol E-ST 11358)
Mike Nesmith 'The Best Of . . .' (RCA APL 1303)
Emmylou Harris 'Pieces Of The Sky' (Reprise K54037)
Rick Nelson And The Stone Canyon Band 'Garden Party' (MCA MCG3515)
Poco 'Poco' (Epic 64082)
Grateful Dead 'Workingman's Dead' (Warner K46049)
Kinky Friedman 'Sold American' (Vanguard VSD69333)
Waylon Jennings 'Honky Tonk Heroes' (RCA AFL 1-0240)
Waylon Jennings/Willie Nelson etc. 'Outlaws' (RCA RS 1048)
Michael Murphey 'Blue Sky, Night Thunder' (Epic EPC 80741)
Willie Nelson 'The Troublemaker' (CBS 81565)
Jerry Jeff Walker 'It's A Good Night For Singin'' (MCA MCG3522)
Johnny Cash 'Bitter Tears' (CBS 62463) and 'At Folsom Prison' (CBS 63316)
Commander Cody 'We've Got A Live One Here' (Warner K66043)
Asleep At The Wheel 'Texas Gold' (Capitol E-ST 11441) and 'Wheelin' And Dealin'' (Capitol E-ST 11545)
Nitty Gritty Dirt Band 'Will The Circle Be Unbroken' (United Artists UAT9801)
Ozark Mountain Daredevils (A & M AMLH 64411)

Different aspects of Cajun music can be heard on **Doug Kershaw's** 'Douglas James Kershaw' (Warner K46264); **Rusty and Doug Kershaw's** 'Louisiana Man' (DJM DJB 26080) and the various **Clifton Chenier** albums on Arhoolie (imported but available from CRD, 12 Lyon Way, Rockware Ave., Greenford, Middx.). Other imports that are currently available include **Steven Fromholz's** 'A Rumor In My Own Time' (Capitol ST-11521—Stage One Imports), **Jerry Garcia, Vassar Clements etc.** 'Old And In The Way' (Round RX103—Virgin Imports) and **Bob Will's** 'BobWills and His Texas Playboys' (MCA 526—EMI Imports).



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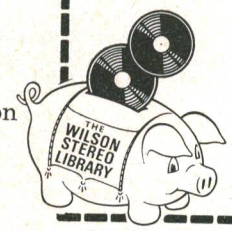
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Die Meistersinger Von Nürnberg

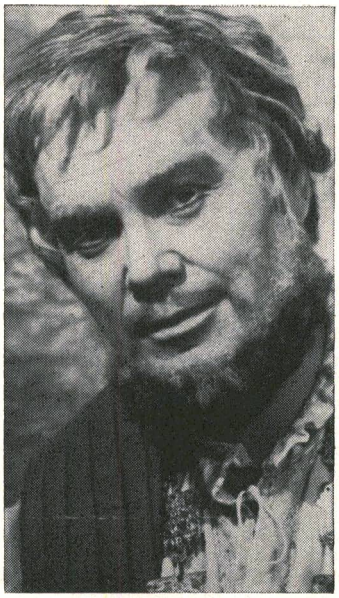
Peter Branscombe

WAGNER: 'Die Meistersinger von Nürnberg'
Dietrich Fischer-Dieskau / Peter Lagger / Roland Hermann / Placido Domingo / Horst Laubenthal / Catarina Ligendza / Christa Ludwig / Chorus and Orchestra of the German Opera, Berlin / Jochum
DG 2740 149 (5 records) (£13·50)

Jochum and the DG engineers give us an excellent performance of this marvellous opera, one that I have listened to with the most lively appreciation and will often return to. It is mellow, broad, dignified; but it is witty too, and deeply moving. For all the care that has clearly been lavished on casting and on points of minute detail, its most noble characteristic is the powerful yet flexible sweep that Eugen Jochum secures. His rhythmic sense and acute ear for sonorities will be familiar to those who know his Haydn or Bruckner readings; in *Meistersinger* he avoids the temptation to search for expressive beauty that sometimes damages his Bruckner—here almost everything sounds fresh, spontaneous, absolutely right, each fluctuation in tempo dictated by Wagner's sense of drama and characterization. It is a studio performance, with all the benefits that can bring; but it derives from a production at the German Opera, Berlin, which brings the advantages of theatrical experience and teamwork. Mercifully there has been no attempt to 'produce' it: effects are limited to the most obvious and necessary observations of Wagner's stage-directions—David gets his cuff that dubs him Journeyman, stage instruments really seem to come from the stage, Sachs actually sounds to be cobbling during his Act II confrontation with Beckmesser. Nothing distracts our attention from the music and action; and rightly, musical considerations take precedence over those of dramatic verisimilitude.

For years we had no stereo *Meistersinger*, and now we have four—not to mention fine, older and recently deleted mono sets. Karajan's Dresden performance of 1971 is the oldest of those currently available; it is notable for superfine playing, rich and sensitive detail, but rather variable singing. Philips brought out their version made under Varviso at Bayreuth just over a year ago; it was recorded live during the 1974 festival, and I thought it triumphed in respect of atmosphere and lithe, joyous music-making over the occasional infelicity attendant upon a real theatre performance. Earlier this autumn Decca brought out their widely-praised Solti version from Vienna, with Norman Bailey as Sachs. So DG are entering a strong field.

Overall, Jochum's cast is probably the best on record, but it would be dishonest to pretend that it was ideal. Indeed, so difficult is this opera to cast that even if one could take this or that singer from another recorded performance, perfection would still hover just out of reach.



Fischer-Dieskau

Fischer-Dieskau's Sachs will surely delight all those who have waited so long for him to take the part—he observes Wagner's vocal line so attentively, sings when he is at his best with a poise and beauty that no other singer can match; there is abundant perception and vitality. Yet I must admit I often felt some lack of naturalness and spontaneity, I was now and then worried by intrusive h's; above all, I was conscious that I was listening to a distinguished singer rather than to Wagner's cobbler-poet.

It was a bold decision to invite Placido Domingo to sing Walther. There is some beautiful phrasing, and ardent tone—but so unidiomatic is his German that the young Franconian knight becomes one of those southwestern foreigners against whom Sachs warns his fellow-countrymen. Catarina Ligendza offers some exciting singing, but she lacks the light, girlish quality of the perfect Eva, a shortcoming that is emphasized by Christa Ludwig's fresh and affecting Magdalena. Horst Laubenthal is the best David I can remember since Dermota in his prime, and most of the Masters are finely done. Roland Hermann gives us a strongly-drawn Beckmesser, infatuated, tetchy, yet also vulnerable and credible. His avoidance of caricature is happily also found in the chorus—which is disciplined, lively and full-throated.

The quality of the recording is generally very good (rough only at the height of the riot), though to my ears there is something artificial about the close microphone-placing—for instance in the Second Act serenade scene, in which the young lovers seem to be physically rather than emotionally in a different world. The surfaces are admirably silent throughout the longest sides, and almost every strand in the complex vocal and orchestral textures is in its place, and can be heard to be in its place. If I am less than happy about some of the singers, I think this will prove a fine set to live with—its virtues are based on the soundest of musical principles, its grandest feature the playing of the German Opera Orchestra under Jochum's inspired and inspiring direction. Despite my reservations, mainly [**A: 1**].

INFORMATION

STEREO, MONO, QUADRAPHONIC and STEREO TRANSCRIPTION

Any record reviewed in this magazine may be assumed to be stereophonic unless its number is accompanied by Ⓜ (monophonic), Ⓣ (stereo transcription), or ④ (quadraphonic: stereo compatible). The symbol Ⓡ refers to a U.K. reissue. Cassettes are Dolby unless otherwise stated.

RECORD FAULTS: 'Recording' ratings should be taken to refer to recorded quality, but do not take account of individual pressing faults encountered with our test samples. Readers may assume that a certain proportion of such variable faults might occur among commercial pressings.

PRICES: We do our best to ensure that prices given with reviews are correct. However, increases are so frequent that we cannot always guarantee accuracy.

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John Atkinson, Trevor Attewell, Peter Branscombe, Christopher Breunig, John Crabbe, Stephen Daw, Kenneth Dommett, Colin Evans, Iain Fenlon, John Freestone, Peter Gammond, Christopher Grier, Arthur Jacobs, Geoff Jeanes, Peter le Huray, Victor McAloon, Hugh Ottaway, Benedict Sarnaker, Humphrey Searle, Isla Tait, Leon Thompson, E. F. Turner, Peter Turner, B. J. Webb

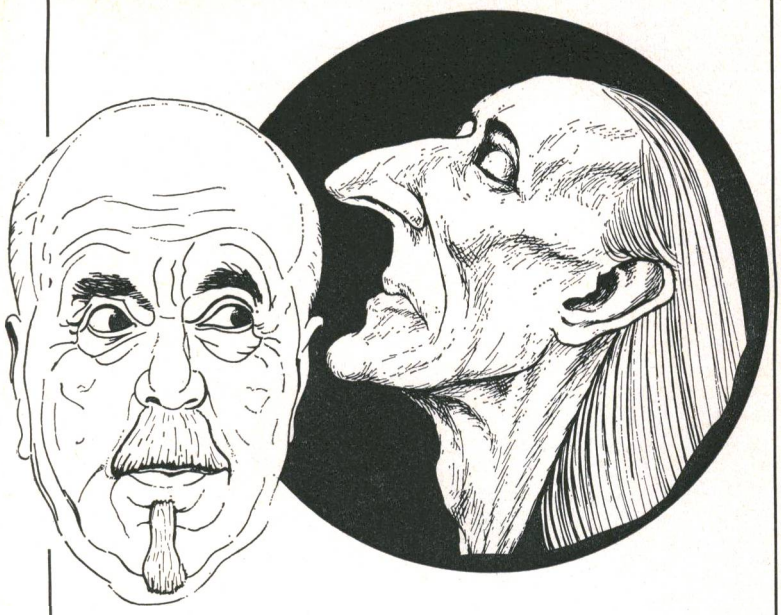
RECORD RATINGS

Record Ratings are designed to summarise our critics' findings, but should preferably be noted in conjunction with the full reports—and taken as a guide only.

Recording		Performance
A	**Very Good**	**1**
B	**Good**	**2**
C	**Moderate**	**3**
D	**Poor**	**4**
H	**Historical (pre-LP)**	**H** (or **1, 2, 3, 4** as appropriate)

Occasionally a record may be worthy of special mention, taking it beyond the 'very good' bracket. In such superlative cases a star is added to the letter or figure as appropriate: e.g. **B: 1***, **A*: 2** or (exceptionally) **A*: 1***.

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Beecham's Historic Delius

John Atkinson

THE MUSIC OF DELIUS [VOL. 1]: The Early Recordings: [1927–1938, 1948]
Paris ☐ Summer Night on a river ☐ Sea Drift ☐ Irmelin—Prelude ☐ Fennimore and Gerda—Intermezzo ☐ Appalachia ☐ Florida Suite—La Calinda ☐ Eventyr Koanga—Excerpts ☐ Over the Hills and Far away ☐ In a summer garden ☐ Hassan—Excerpts ☐ Brigg Fair ☐ On hearing the first cuckoo in Spring ☐ Walk to the Paradise Garden ☐ Songs ☐ A Mass of Life—Excerpts ☐ 2 Beecham BBC interviews
London Philharmonic / Royal Philharmonic / Symphony Orch / BBC Chorus / Royal Opera Chorus / London Select Choir / Dora Labette / John Brown Lee / Heddle Nash / Gerald Moore / Beecham
World Records SHB 32 (5 records) Ⓜ (£9·95)

It is strange what fascination Delius' works had for Sir Thomas Beecham. Their personalities were poles apart, as admitted by Beecham in a 1959 BBC *Monitor* interview included here, and yet it cannot be denied that Beecham had true insight into the impressionistic and often sensual music that he proselytised from 1910 onward, and his 1927 electric recordings of *Brigg Fair*, *On hearing the first cuckoo in Spring* and *The walk to the Paradise Garden* were treasured by Delius in his last years at Grez-sur-Loing. These recordings, together with a number of works recorded under the auspices of the Delius Trust for Columbia in the thirties and a 1951 radio talk by Beecham on *A Mass of Life* with musical examples recorded in 1948, have been released by World Records, with the permission of Lady Shirley Beecham for the issue of many previously unavailable recordings.

The transfer from 78s has been carried out with great precision and skill by Anthony Griffith and (despite the lack of computer enhancement techniques as are being used on a number of similar recordings) the sound is surprisingly good. The orchestral recordings, *Paris* and *Eventyr* from 1934, and the aforementioned 1927 recordings, have great warmth and clarity, despite being a little cramped at climaxes—and many of the pieces in this set are preferable in many ways, despite their age and lack of stereophony, to some more recent recordings. Surface noise is annoying only in a few pieces and great credit is due to World Records for the unobtrusive way the short 78 sides have been joined. The sound quality is least satisfying on the songs included (mostly from 1929), but is more than made up for by the performance by Dora Labette and Heddle Nash accompanied by both Gerald Moore and Beecham himself.

Included as a welcome bonus is Beecham's 1959 biography of Delius in paperback with an extensive discography and a new introduction by Felix Aprahamian; the background to this book and the recordings is given in the *Monitor* interview. This boxed set of English 'masterworks' has been long awaited by Delius aficionados and a Volume Two, which will include the 1948 premiere recording of *A Village Romeo and Juliet*, is planned. Our Art Editor, Mark Stevens (of the Delius Society), echoes these thoughts, and we both congratulate 'World Records' for the excellent presentation! **[H: 1/1*]**

Haitink's Consistent Beethoven

Christopher Breunig

BEETHOVEN: Symphonies 1–9
Hannelöre Bode (sop) / Helen Watts (con) / Horst Laubenthal (ten) / Benjamin Luxon (bass) / LPO Choir / LPO / Haitink
Philips 6747 307 (7 records) (£16·49)

Early in his recording career with Philips (1963) Bernard Haitink did the *eighth*, with the Concertegebouw Orchestra, but he has felt 'no hurry' to record a complete Beethoven cycle. Forty-eight this year, he has now provided the first set of the symphonies made by the London Philharmonic—at least in the LP era. The recordings were produced at Watford, with Volker Straus, between Nov. '74 and May '76.

Some associated concert performances were not especially admired by the critics: orchestral discipline was below the anticipated standards. But here the general level is high. Occasionally winds and strings do not quite attack together—the opening chords of the C major symphony, for instance—although nowhere is there the 'spreading' of ensemble that runs through the VPO set under Schmidt-Isserstedt. The LPO make a very good Beethoven sound, with very impressive lower strings; the woodwinds contain outstanding flute and bassoon players. The oboes' colour is a bit dull, but there is a nice oboe solo in the third movement of the *Pastoral*.

Haitink does not attempt to give all repeats (as noted below), and his approach is traditional: the *seventh* exemplifies this. One or two movements I find a shade too relaxed, even if they are alive rhythmically; Haitink is particularly good at relating trios to his scherzi speeds, and at seamless and inevitable-sounding commencement of repeats. He brings unusual delicacy and refinement to Beethoven's quiet sections, and certain finales (e.g. 7th, 9th) build in excitement just as one would hope for in live concert performances. In short, the approach is very sane, balanced, and certainly never dull.

This is perhaps the most consistent, consistently satisfying, of the Beethoven cycles we have had in stereo. The recorded sound varies, from 'star' quality (the *Choral*, with No. 8 the last to be tackled) to **B** for the *Eroica*, where side 1 runs for 31′21″. Perspectives have a concert-hall realism, yet there is plenty of immediacy—again, try the *ninth*.

Symphonies 1, 2, 6. These are exemplary performances, with full repeats: Haitink too does the notorious one in the minuet of No. 1. Tempi are deceptively easy-going, but rhythms are pointed. Ritard, end of *Larghetto* (No. 2) possibly exaggerated. Traditional rit. at beginning of *Pastoral* observed without fuss—delicate shading of dynamics, clean sound; birdsong coda in (ii) simple. *Thanksgiving* lovely reading.

Eroica. No repeat in (i); tempo uneasy compromise between Toscanini-like flowing speed, and deliberate manner of German conductors—lacks fire. *March* dignified, less individual than Kubelik's; excellent scherzo. *Symphony 7*: recorded at same time, but runs at much higher voltage—finale fast, almost scramble for LPO. Regrettably no exposition repeats in outer movements, full repeats in (iii) except 441–482. Trio slow, but much grandeur in fortissimos! Allegretto conventionally slow, but nicely pointed; vigorous first movement. Overall strong commitment, arguably best traditional reading since Konwitschny's.

Symphony 4. With repeats. Opening allegro a shade heavy in manner; fast in (iii). Powerful tympani accents in finale—nice flow, recalls Krips/Concertgebouw. *Symphony 5*: no finale repeat; complete on one LP side. Haitink does not prolong opening rests/pauses: considerable tension generated. Bassoons at 303 as score. Dynamic range not so refined here. (ii) lower strings have superb warmth; sound seems more recessed than in (i). (iii) lovely bassoons 267–73; feeling of major-key resolution in finale, superb final Presto. Piccolo balances just right. Impressive account.

Symphony 8. Perhaps the hall acoustics influenced Haitink's tempo for (i), I find it too relaxed. Menuetto slow but effective, beautiful trio. All repeats.

Choral. Well matched quartet, excellent, radiant choral work. Full scherzo repeats, terrific climax at letter G. Opening tremoring string figures finely gauged between explicitness/impressionism; mid-movement climax especially awesome. With its warm human qualities, easily the most satisfying of all modern recordings.

A strongly recommended set—the flawless pressings are from Holland. Perhaps Haitink will do No. 3 with the Concertgebouw some day, but I find nearly everything else well conceived and musically very rewarding. **[A*/B: 1*/2]**

Best of the Month

101 Art of the Netherlands
100 Consistent Beethoven
102 Starred Sonatas
103 Treasured Brahms
100 Historic Delius
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107 More Stephen Foster
109 A Feast of Handel
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113 Starred overtures
113 Attractive Palestrina
115 Distinguished Rachmaninov
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117 Accardo's Tchaikovsky
99 Die Meistersinger

Art of the Netherlands

THE ART OF THE NETHERLANDS
Music by Josquin des Prés, Isaac, Brumel, Ghiselin, Ockeghem, Agricola, Obrecht, Tinctoris, Pierre de la Rue, Compere, Mouton *and* Verdelot
Early Music Consort of London / Munrow
HMV SLS 5049 (3 records) (£9·50)

It is hard to believe that in the short space of twelve months, this is the third major record album from David Munrow and the Early Music Consort. In every way, this new release lives up to the success of its two immediate predecessors and, in some ways, particularly in terms of vocal performance, it perhaps even surpasses them. Like the recent album of Gothic music on DG, this set is sensibly and conveniently divided into three volumes which between them give a colourful and comprehensive cross-section of Netherlands music between the years 1450 and 1520.

Volume 1 includes 14 secular songs, among them the well-known *Scaramella va alla guerra* which is given a lively instrumental accompaniment, and *El grillo* which comes off beautifully with excellent precision in the vocal work. The plaintive *Du tout plongiet* by Brumel is made even more expressive by Martyn Hill's excellent vocal work, and both counter-tenors Charles Brett and James Bowman are at their best in some of these songs. Some of the songs appear in several versions, and although this is a useful addition, it might have been more helpful had they been banded individually.

Volume 2 includes both Instrumental music and some Mass movements, and as the former section includes thirteen separate numbers played on a variety of instruments, it becomes almost a catalogue of instruments of the period. Isaac's *A la Bataglia* is a rather resplendent battle piece—one of the earliest apparently—in which Renaissance timpani are used, but particularly interesting is the anonymous setting of *T'andernaken* which was later set by a number of other composers, and is known in its setting by Henry VIII. The Mass movements contain some real gems, especially a *Kyrie* by Tinctoris, which has been set with a remarkably low voice range, giving a quiet and beautifully hushed sound. Outstanding among the movements is a *Sanctus* by Pierre de la Rue, but this is perhaps surpassed in terms of performance by the incredibly beautiful *Nesciens Mater virgo virum* by Jean Mouton in Volume 3. Its meandering vocal lines and iridescent warmth make this motet one of the highlights of the album, as is James Bowman's poised performance in Compere's *O bone Jesu*.

The record is accompanied by a very well produced booklet of 27 pages which includes texts, translations and other relevant details of the music and instruments. The recording is of the highest quality throughout, the balance beautifully judged, and a spacious stereo image.

It might look a bit specialised, but this album turns out to be a most rewarding collection of music which has a great deal of appeal. **[A*: 1*]** *Colin Evans*

C. P. E. BACH: 'For connoisseurs and amateurs'—sonatas, rondos and fantasias
Huguette Dreyfus (fortepiano)
DG 'Archiv' 2533 327 (£3·59)

This record helps fill a mighty gap in the collector's knowledge of C. P. E. Bach's keyboard output, and more generally of late 18th century music. Let us hope it will be followed by recordings of the even more influential and striking sets of 'Prussian' and 'Württemberg' sonatas. Our warm welcome for this issue is based in equal measure on the sterling merits of the well-chosen works, the sensitive and elegant performances, and the instrument on which they are here played. It is a *Hammerflügel* by Könnicke, made in Vienna in 1796—roughly a decade after the latest of the pieces here played on it—and now housed in the famous Neupert Collection in Nuremberg. Huguette Dreyfus gives admirably stylish and unfussy performances, crisp and clear in fast movements, expressive and elegant in slow. She contrasts admirably the light, simple style of the C major Sonata (Wotquenne 55/1) with the more personal and bold D minor Sonata (Wq 57/4), its first movement taken at a deliberate pace the point of which soon becomes abundantly clear. In the rondos (Wq 56/1, 57/1 and 61/4) she finds a lilting touch while maintaining a firm structural sense, and the fantasias (Wq 58/6 and 59/5) hover pleasingly between firm tonal bases and improvisatory flourishes. The instrument is given a clean, forward acoustic that shows its tonal characteristics to fine advantage. and there is a valuable note by William S. Newman. Excellent. **[A: 1]** *Peter Branscombe*

J. S. BACH: Cantata, BWV 10, 'Meine Seel erhebt den Herren' □ Cantata, BWV 24, 'Ein ungefärbt Gemüte' □ Cantata BWV 135, 'Ach Herr, mich armen Sünder'
Edith Mathis (sop) / Anna Reynolds (con) / Peter Schreier (ten) / Dietrich Fischer-Dieskau (bass) / Kurt Moll (bass) / Munich Bach Choir and Orchestra / Richter
DG 'Archiv' 2533 329 (£3·59)

When comparing Richter's Bach with Harnoncourt's it is often difficult to recognise that one is listening to the same composer, let alone the same work. There are two cantatas here for comparison: BWV10 and 24. The opening of the BWV24 provides the most striking contrast so far. Richter's richly sonorous strings barely manage to articulate the repeated notes of the ritornello theme; surely the words that follow must be yearningly, nay profoundly moving. But no! 'An unstained mind [sings the contralto, beautifully] of German constancy and goodness makes us beloved of God and men'. At the other end of the spectrum comes Harnoncourt's choreographically articulated interpretation which in its own context seems perfectly appropriate, but which when set against Richter's might be thought to be treating the whole thing as a bit of a joke. In general, though, Richter seems to project the music not so much at a devotional congregation as at a concert audience. His treatment of the last choral of BWV24, for instance, is obviously aimed at audience impact rather than meditative atmosphere. Richter's BWV10 contains many good things within its own scale of values, and notably a splendidly vital first movement. But here again the soprano soloist (and indeed the whole ensemble) are less good at projecting 'the lowliness of his handmaiden' than the magnification of the Lord. For this reason perhaps a less sophisticated performance (such as a good solo boy would give) is to be preferred. There is one absurdity in the new version of BWV10: the continuo organ realisation of the aria, 'God puts down the mighty'. The bass line here is in fact the instrumental ritornello 'melody'; the organist has not appreciated this, and he has attempted the impossible: the addition of a new self-contained melody above the bass. Both BWV10 and 135 are of a high musical order, and are most colourfully scored. In sum, music worth getting to know, and performances of their kind that are excellent. The recording, too, is good, if you are not worried by perspective distortion. **[A/B: 1]** *Peter le Huray*

J. S. BACH: Cantata, BWV 23, 'Du wahrer Gott' □ Cantata, BWV 87, 'Bisher habt ihr nichts gebeten'
Edith Mathis (sop) / Anna Reynolds (con) / Peter Schreier (ten) / Dietrich Fischer-Dieskau (bass) / Munich Bach Choir and Orchestra / Richter
DG 'Archiv' 2533 313 (£3·59)

This deserves an Oscar, if only for the extraordinarily beautiful tenor aria, 'Ich will leiden' (BWV87), surely one of the most moving and romantic pieces that Bach ever wrote. The whole cantata, indeed, is noteworthy, and beautifully sung by the three soloists (if a trifle agressively at first by Fischer-Dieskau). BWV23 is of course already on Telefunken; in this case the most obvious difference lies in the straightness of the Concentus Musicus sound and of the absence of vocal vibrato. There are rather more minuses than pluses for this newcomer on my comparative marksheet. The biggest minus arises from the unfocused and rawish sound of the Munich choir. Some listeners may find the Telefunken articulation somewhat overdone, particularly in the final chorale of BWV23 in

which the instrumental sighs are given full weight; in general however the 'authentic' small-group instrumentation is more vital. The acoustic of the Archiv hall is very spacious; the sound is most acceptable, although there is some (almost inevitable) blurring in the more complex choral/orchestral sections, and some fiddling around with balance. [**A/B: 1/2**] *Peter le Huray*

J. S. BACH: Cantata, BWV 34, 'O ewiges Feuer' □ Cantata BWV 68, 'Also hatt Gott die Welt geliebt' □ Cantata, BWV 175, 'Er ruft seinen Schafen mit Namen'
Edith Mathis (sop) / Anna Reynolds (con) / Peter Schreier (ten) / Dietrich Fischer-Dieksau (bass) / Munich Bach Choir and Orchestra / Richter
DG 'Archiv' 2533 306 (£3·59)

At last we have the chance to hear the whole cantata, BWV68, from which the ever popular 'My heart ever faithful' comes: the original aria is delightfully unexpected, followed as it is by an instrumental 'workout' for oboe, violin and continuo, sounding like nothing so much as a Menuhin-Grappelli number from 'Hits of the Thirties' (EMD5504). The other new arrival, BWV175, also contains much delicious music, notably a charming aria for alto, three recorders and strings, 'Komm leite mich'. BWV34 has already been issued by Telefunken in the collected cantata series; choice here rests almost entirely on individual preference for weight or articulation; the contrast is at its most evident in the orchestral playing of the outer movements. Comparisons should also be made however between Esswood and Reynolds in the central aria, both superb in their own ways. Unexpectedly, perhaps, the lighter, more articulated instrumental obbligato (a magical sound, for flute and strings) is the more romantic of the two, and appropriately so. Of its kind this is an excellent record. Whether or not the engineers should be allowed so to distort the natural balance of forces is a moot point. My feeling is that the excessive concentration on the solo voices, the placing of the obbligato instruments in the middle foreground, and the continuo in the next parish (as in 'Offnet euch', BWV175) is just not on. [**B: 1**] *Peter le Huray*

J. S. BACH: Fifteen 3-Part Inventions (BWV 787–801) □ Trio Sonata in E♭ (BWV 525) □ Trio Sonata in d (BWV 527)
Emília Csánky (ob) / Kálmán Berkes (clt) / György Hortobágyi (bsn)
Hungaroton SLPX 11814 (£2·50)

The three-part Inventions, or more correctly Sinfonias, first appeared in 1720 with the closely related two-part inventions in the *Little Clavier Book* and although written originally for the soft-toned clavichord, have been appropriated by instrumentalists since Mozart's time as study pieces. Indeed, this reviewer's first exposure to them was with an impromptu consort consisting of two clarinets and a bass guitar—unorthodox but great fun. This would appear to be the first recording of such arrangements, but immaculately played with sensible phrasing by three young members of the Hungarian State Radio Orchestra, and although pedants might well throw up their hands in horror at this record, it can stand on its merits. All arrangements have to be judged on how well the idiom of the music transfers, and these work very well, not too surprisingly as the clavichord is capable of almost woodwind-like nuances of expression. This is not to say that all 15 work equally well, the B minor arrangement is a little bit of a forced fit, while the beautiful E♭ Sinfonia with its singing ornamented upper parts and constant broken-chord bass line could well have been written for the modern wind trio. It is sometimes thought that Bach's trio sonatas were meant to be played on the baroque organist's practice instrument, the pedal clavichord rather than the organ, and as with the sinfonias, the wind trio fits the musical idiom perfectly; it would be a rare organist who could do all three horizontal lines justice in the way that these three separate instrumentalists do.

The recording is excellent, with the three instruments spread across a realistic sound stage with just the correct amount of ambience that this intimate music requires. There is virtually no obtrusive noise except for a small amount of unavoidable key clatter, and it is interesting to note that Dolby-A noise reduction units were used for this Hungarian recording. [**A: 1**]

John Atkinson

BALLADS, SONGS AND SNATCHES
Forbes Robinson (bass) / Robin Stapleton (pno)
Argo ZDA174 (£2·99)

A collection of nineteen songs makes up this album of parlour favourites, which include songs like *On the road to Mandalay*, *Nobody knows the trouble I've seen*, *The Derby ram* and, almost unbelievably, *Sing a song of sixpence*.

It's all quite jolly stuff, even though some of the music is almost embarassingly trite, and Mr. Robinson makes the most of the material in question. Rimsky-Korsakov's *Night* is given an attractive reading, and there is some competent piano work from Mr. Stapleton.

Somewhere, someone's maiden aunt will enjoy this record. [**A: 1/2**] *Colin Evans*

BEETHOVEN: Military March in D □ 12 German Dances □ Gratulations-Menuett □ 'Ruins of Athens'—Marcia alla turca / **MOZART: March in C, K.408: 3 □ 5 Contredanses, K.609 □ 2 Minuets with Contredanses, K.463 □ March in D, K.408: 2 □ Contredanse K.535 'La Bataille' □ 6 German Dances, K.509**
Rotterdam Philharmonic / de Waart
Philips 9500 080 (£3·50)

Collectors of Edo de Waart's Mozart wind series, on Philips, will anticipate rightly that he does these little pieces very well—just the right amount of tension applied.

Both Mozart and Beethoven allowed their thoughts to return to old ideas, in commissions such as these: K.609 starts with something straight out of *Figaro*; K.535 shares an idea to be found in one of the piano sonatas. Beethoven's *Turkish March* re-uses the Op. 76 piano variations' theme; the March in D has some brassy flourishes recalling *Wellington's Victory*. What is even more striking about this coupling is the comparitive sheer refinement of Mozart's miniatures.

Both sides are engagingly performed and impeccably engineered. But I wish Philips had followed the precedent of 'Little Marches by Great Masters', which was released at *Universo* price. That disc has now been deleted, unfortunately. [**A: 1**]

Christopher Breunig

Starred Sonatas

BEETHOVEN: Violin sonata 3 in E♭, Op. 12: 3 □ 8 in G, Op. 30: 3
Itzhak Perlman (vln) / Vladimir Ashkenazy (pno)
Decca SXL6789 (£3·50)

David Anstey may not have matched his first cover, in this series of gnome-like Beethoven portraits (SXL6632—sonatas 2 and *Kreutzer*), but the artists and engineers certainly have proved consistent. What splendid drive and brilliance in Ashkenazy's playing in the opening allegro of the E-flat. I like too the directness of the slow movement, with no attempt to make the music emulate the profundity of Beethoven's later adagios.

In the *Tempo di Minuetto* of the G major sonata the playing is again delightful; the finale I find a shade hectic—at a typically stately tempo Kempff and Menuhin (DG) still convey the vivacity of the music. I also feel that the Decca producer has taken too literally Beethoven's title-page inscription, recessing the violin. The DG balances make the music seem more 'complete'. I should point out that each of the three Decca discs so far has involved a different production team, although all the recordings were done at Kingsway. A star for the Op. 12. [**A*/A: 1*/1**] *Christopher Breunig*

BEETHOVEN: Piano sonata 8 in c, Op. 13 'Pathetique' □ 14 in c♯, Op. 27: 2 'Moonlight' □ 23 in f, Op. 57 'Appassionata'
John Lill (pno)
Enigma VAR1001 (£3·49)

John Lill's *Appassionata* has considerable stature. He is just as powerful a pianist as Lazar Berman, but he quickly establishes his supremacy as a Beethoven interpreter, with an eloquence and depth of understanding nowhere matched by the Russian. The first movement is unusually spacious and cogent. In the two earlier sonatas Lill is similarly faithful to the texts, and his readings are totally free of eccentricities. Perhaps the slow introductions to the *Pathetique* and the *Moonlight* adagio are too literal, and lack some rhythmic impetus—also certain of the Op. 13 mordents are not perfectly clean.

However, Lill was labouring against what have turned out to be unacceptably poor production standards. Not only was the pressing noisy in itself, but the recording, with innumerable pre-echoes, gave the impression of recession in the quiet passages, whereas as the dynamics increase the quality becomes muddy and rings angrily. The last pages of the outer movements from Op. 57 are quite bad examples of piano recording: odd, since John Boyden has prepared this coupling before (Chorzempa/CFP), quite agreeably. [**C/D: 1*/2**]

Christopher Breunig

BEETHOVEN: Piano sonata 18 in E♭, Op. 31: 3 □ 23 in f, Op. 57 'Appassionata'
Lazar Berman (pno)
CBS 76533 (£3·49)

Berman shows that he is a dyed-in-the-wool romantic. His Op. 57 does not seem very different from the 1958 version he made for Saga (recently resuscitated); the opening movement remains episodic and heavily accented, quite lacking the steady, impressive growth of John Lill's. Best is the finale, repeat taken, which ripples in a Schubertian way.

The E-flat sonata offers the player opportunities for wit and virtuosity. I am sorry that Berman omits the exposition repeat (first movt.). As I remarked last month, Gulda on *Eclipse* is both witty and brilliant in the scherzo, which Berman plays in a somewhat intense, yet mechanistic way. In short, he does not reveal a lot about these works, either harmonically, or structurally. The playing sounds instinctive, naive, even, in effect. What is surprising here is some unevenness of execution—awkward trills, blurring through pedalling, a lack of gradings

of soft dynamics. The engineering is clean, but hard. [**A/B : 2/3**]

Christopher Breunig

BRAHMS: *Clarinet Trio in a, op. 114 / WEBER: Grand Duo Concertant, Op. 48
Enigma VAR10121 (£3·49)

It is always nice to come across one's first record with a new label, particularly when under-recorded artists of class present nicely contrasted masterpieces. In this case there are two currently available versions of each work, but their couplings prevent a straight confrontation. I have enjoyed hearing this performance of the Brahms Clarinet Trio, the first of the four works Brahms wrote late in life for (and with practical help from) Richard Mühlfeld. There is a suitably tender, veiled quality about much of the playing; I would have welcomed greater contrast between the middle movements, marked Adagio and Andantino grazioso, but the outer movements are nicely judged. In the Weber Duo, of which I reviewed The Music Party's performance using old instruments last June, Keith Puddy and Ian Brown miss something of the 'con fuoco' that Weber adds to his Allegro tempo-marking, though the spirit and grace are there. The clarinet tone is at times rather blatant—I think it would have helped if the recording had been cut at a lower level, with less close microphone-placing. There is a lot of background noise, and some pre-echo. But these are strong, personable performances. [**B/C : 2**]

Peter Branscombe

Treasured Brahms

BRAHMS: Violin Sonata No. 1, Op. 78 □ Trio for Violin, Piano and Horn, Op. 40
Arthur Grumiaux (vln) / Gyorgy Sebok (pno) / Francis Orval (hn)
Philips 9500 161 (£3·50)

The satisfaction I feel over these two marvellous performances stems from two things: the exceptionally complete understanding between the artists, and the grasp—indeed the demonstration—of the unity of each movement and of the complete works. Never have I heard those things as they are displayed here; and that is why I feel that these performances shed new light upon works I have long known and loved. One can ask no more of a performance than that, save that the execution shall leave nothing to be desired; and by the powers it does reach that standard. Here joy is unconfined, and perception limitless: the intensity of the first movement of the sonata, and the meditative beauty of the second, are a revelation.

Happily—as is not unusual with Philips' chamber-music recordings—the standard of recording is equal to the task, with an ideal balance in the sonata. The trio, however, is curious. Brahms wrote it for the 'natural', unkeyed horn. We are not told if such an instrument was used here, but if not a very good imitation of one is given; but the instrument is balanced so far back that most of the time we get the horns of elfland faintly blowing, and one has to strain to hear what is going on. I have the feeling that this is an artistic decision and not some quirk of producer or engineer, but I cannot feel that it entirely succeeds. Heaven defend us from a blasting horn, but it needs to be played, not louder but a shade more forward—or so it seems to me. On this ground alone I refuse it the ultimate star; but if Quality Monitor should restore it, I shall be delighted. Do not miss this record: it is a treasure. [**A*/A : 1***]

Peter Turner

BUSONI: The complete disc recordings (and Busoni pupils)
Desmar IPA104 Ⓜ (£3·75)

This record, from the *International Piano Archive* series, reproduces Busoni's 1922 British Columbia 78s on one side; side 2 is devoted to three pupils—Petri in the Chaconne from Bach's D-minor Partita, Zadora in the *Carmen Fantasie* (both in Busoni's arrangements). Edward Weiss, the third pianist represented, plays movements from Book 1 of the *Indian Diary*, and contributes a sleeve portrait of the great composer-performer. He attests to the 'fidelity' of the recordings, although pointing out that it was a capacity for massive works that set Busoni apart as an interpreter.

At least an indication of Ferruccio Busoni's attitude to playing is given by the fact that all nine tracks were completed during a single day. He made a popular Chopin group, including two versions of the Op. 10:5 *Etude*, transcriptions of Bach and Beethoven (*Ecossaises*), an abbreviation of Liszt's *Hungarian Rhapsody 13*, and the first piece from the *Well Tempered Klavier*.

If the pianism of Zadora is impressive, that of his master is, frankly, astonishing. Not only is the technique superlative—e.g. *Rejoice Beloved Christians*—but the sound has a unique luminosity, and live quality. No amount of surface fizz can dull the brilliance of such spontaneous playing. It cannot be denied that the style borders on the eccentric, especially in the Chopin, yet this collection makes one realise what sacrifices we have made in our contemporary obsession with objective accuracy in musical performance. [**H : H(*)**]

Christopher Breunig

BYRD: My Ladye Nevells Booke
Christopher Hogwood (virginal, hpd and org)
Oiseau-Lyre D29D4 (4 records) (£9·95)

Despite the fact that *My Ladye Nevells Booke* holds something of a privileged position in the annals of English keyboard music, it seems curious that no one really knows who Lady Nevell is or, more accurately, was. Presumably she was either a patron or a pupil of Byrd, but if the latter, she must have been a very special one, for the book contains 42 works by Byrd, copied out by one of the most famous musical scribes, John Baldwin of Windsor. The book was completed in 1591, and now rests at Eridge Castle in Sussex. It is of course, unique, and the fact that it was checked by Byrd himself without passing through the hands of well-meaning copyists, gives this recording a special significance. Some of the pieces, like *The Battle* and *The Carman's Whistle*, have become well-known through other sources. These four records include all 42 pieces of *My Ladye Nevells Booke*, and the accompanying booklet gives detailed descriptions of each of the pieces together with information about instrumentation, performing practice, and the background history to the collection.

Four instruments have been used for this recording, a virginal, two harpsichords and a small chamber organ. All are modern instruments, built to designs commonly used during Byrd's lifetime. Mr. Hogwood has decided which pieces should be allocated to the various instruments, and the variety of sound and tone colour this produces makes a welcome contrast.

Much care has been taken over the *tempi* of the pieces and several tuning systems have been used for the various instruments. Throughout the album, Christopher Hogwood impresses with his fine technical control and his musicianship.

The recording too, is competent, although the instruments sometimes seem a bit on the close side. Perhaps this is something of a specialist release, but is nonetheless an important one, and those with a particular interest in the period would find it a rewarding purchase. [**B : 1**]

Colin Evans

JOSE CARRERAS—RECITAL
Arias by Bellini, Donizetti, Mercadente, Ponchielli/ Verdi
Jose Carreras (ten) / Royal Philharmonic / Benzi
Philips 9500 203 (£3·50)

Following his début at the Liceo in Barcelona, Jose Carreras has had a meteoric rise to the very top of his profession and is today rightly considered to be one of the finest tenors before the public. He has already appeared in several complete recordings of operas, including Rossini's *Elisabetta* (Philips 6703 067) and Verdi's *Il Corsaro* (Philips 6700 098).

On this, his first solo recital disc, he has chosen a very interesting programme including some arias which have as far as I know never been previously recorded, including 'Ecco, signor, la sposa' from Bellini's youthful *Adelson e Salvini* and 'Il padre!—Tenda natal' from Ponchielli's *Il figluol prodigo*. In all of these Carreras uses his lovely voice—certainly one of the most beautiful natural tenor voices of the last thirty years—with good technical control, well supported on the breath. His excellent diction and ringing high notes make the most of the dramatic situations, and it is only occasionally that one would prefer a little more contrast. At present he is inclined to revel in the sheer power of the voice and stylistically he makes little difference between the pure bel canto of 'Angelo casto e bel' (*Il Duca d'Alba*—Donizetti) and the more dramatic 'Ma se m'e forza perderti' (*Un Ballo in Maschera*—Verdi), while Bergonzi, in his complete recording of *Luisa Miller* makes more of the lovely 'Quando le sere al placido' (RCA Victor SER 5534/5/6.) However, the beauty of the voice is always apparent, and Carreras is to be congratulated in choosing so many unhackneyed items for his recital. Excellent recording and fine playing by the Royal Philharmonic under Benzi combine to make this a most attractive release. [**A : 1**]

John Freestone

GWEN CATLEY—RECITAL
Arias and songs by Bizet, Delibes, Gounod, Mozart, Offenbach, Ponce, Rossini, Verdi
Gwen Catley (sop) / Various orchestras and conductors
HMV HLM 7066 Ⓜ (£1·99)

Gwen Catley recorded these selections during and immediately after the second world war, and they were very popular in their day, as they were sung in English, and very well sung at that. Her light soprano voice recorded excellently and her singing was characterised by neatness of execution in the coloratura passages, good intonation and great purity of tone. Her best known operatic role was Gilda in *Rigoletto* which she frequently sang as a guest artist with the Carl Rosa Opera Company.

The re-recordings have been carried out with the usual high standard one has come to expect from EMI, and the disc can be recommended to those who remember the artist in person, and to younger music lovers who

appreciate the art of coloratura singing. [**H : 1/2**] *John Freestone*

CHERKASSKY RECITAL
SCHUMANN: Etudes symphoniques, Op. 13 / CHOPIN: Ballade 3 in A♭, Op. 47 □ Etude in c♯, Op. 10: 4 □ in c♯, Op. 25: 7 □ in b, Op. 25: 10 / ALBENIZ (arr. Godowsky): Tango / SCHUBERT (arr. Godowsky): Moment Musicale 3 in f
Shura Cherkassky (pno)
Oiseau-Lyre DSLO 15 (£3·50)

Notwithstanding the excellence of 'Cherkassky Kaleidoscope' (DSL07), this volatile artist is at his inspirational best in the recital hall—as his earlier Philips *Fourfront* records have demonstrated. The present disc comes from tapes made live at the Queen Elizabeth Hall; some applause is included at the end of each item. Characteristically, the programme ends with two of Godowsky's elaborate transcriptions. The delightful *Tango* is also included in Perlman's marvellous Kreisler collection on HMV ASD3258.

I would not rate the Chopin group as other than ordinary, although Cherkassky's individual reading of the Op. 10 *Etude* has a nice quiet concentration. But to the main work, apart from an underpowered finale, Cherkassky brings a unique poetry and variety of moods. A version to rank with Arrau's or Richter's. However, one must add that Perahia's *Summer Festival* performance was even more memorable: one hopes he will record the work for CBS soon. Oiseau-Lyre's recording is wholly acceptable, technically; perhaps the frequency range is more subdued than in the best studio productions. [**A/B : 1**] *Christopher Breunig*

CHOPIN: Complete Preludes
Daniel Barenboim (pno)
HMV ASD3254 (£3·50)

When HMV put out the record of Daniel Barenboim playing two Chopin sonatas numbers 2 and 3 something over a year ago, I welcomed his classical approach in place of over-romantic, even fevered treatment given to these works in some recent recordings: Barenboim's restraint allowed his fine finger work to be appreciated.

But, I am not so enamoured of this version of the Preludes. With all the time in the world to listen I was able to hear a considerable number of pianists who had recorded the Preludes and my verdict is, give me Perahia.

In the Barenboim record what is taken slowly is rather too slow; the first prelude almost drags and on the second side there is hardly a pause between several, possibly to fit them all in. The precise fingering which I admired in the Sonatas is still there, but only sometimes; Prelude No. 3 is not precise at all.

For me a disappointing record, with much that is attractive but with parts that are not up to the best standards of today. And in the recording too there seems to be a lack of body. [**B : 2**] *Isla Tait*

CHOPIN: Preludes Nos. 1–26 □ Trois Nouvelles Etudes
Nikita Magaloff (pno)
Philips 'Universo' 6580 118 (£1·99)

This is a good record. It worthily displays the beauty and charm of these exquisite miniatures—worthy successors of the Op. 10 and Op. 25 Etudes, which are their models.

Their perfection is all the more remarkable since we know that a number of them were composed during that disastrous holiday which Chopin endured in Majorca with George Sand and her detestable children.

M. Magaloff plays them 'straight' without any quirks of speed or dynamics; the piano tone is good, particularly in the bass, which is full and round toned.

I was particularly glad to see that the record included the solitary C sharp minor Op. 45, a gentle meandering piece which modulates through all the twelve keys of the chromatic scale; the piece calls for skilful pedalling if it is not to sound blurred. M. Magaloff plays it beautifully; it is a pity that it seldom figures in recital programmes.

A greater and most welcome surprise was the posthumous prelude No. 26 in A flat, an early work, but not published till 1918, which I was hearing for the first time; it is not of course included in Klindworth's edition of the preludes. To enjoy a first performance of a work of Chopin's after seventy years of concert-going must be a rare occurrence. It proved to be a delightful little piece. [**A : 1/2**] *E. F. Turner*

CHOPIN: Complete Nocturnes
Nikita Magaloff (pno)
Philips 6780 024 (2 records) (£3·50)

Nikita Magaloff has a reputation as a Chopin player, particularly on the Continent, built on his recitals covering complete sections of the composer's works. In 1971 he gave us, on the Decca label, his account of the Mazurkas, a version still current and recommendable. The modestly-priced Philips set of the Nocturnes on these two discs appears to be German in origin and was recorded in 1974, but is only now released for the first time.

The nature of the Nocturne as we now think of it was first established by the Irish composer John Field, and is distinct from that of the earlier Notturno, being essentially that of a relatively short, slow piece of romantic pianoforte music directly connected with Chopin, who freely developed the form as established by Field and extended its range of expression in such masterpieces as those of Op. 27 onwards.

There is no music easier to over-sentimentalize in performance than the Chopin Nocturnes; Magaloff does not fall into this error. His account of these pieces is straightforward; it does not have the magic, the sheer poetry of those performances with which Solomon used to delight us. Some listeners may find it rather too 'matter-of-fact,' but there is no lack of dynamic contrasts.

Piano tone is good, and the recording is reasonably clean, slightly on the hard side in the treble, where it gives a feeling of some constriction in loud passages. There is a fair degree of recorded ambience. The most disturbing feature of the recording is the high level of tape hiss when reproduction is at natural levels through wide-range speakers with smooth and extended top response. [**C : 2**] *B. J. Webb*

CHOPIN: Andante Spianato and Grande Polonaise Brillante, Op. 22 □ Nocturne in B, Op. 62, No. 1 □ Scherzo in E, Op. 54 □ Polonaise-Fantaisie, Op. 61
Emanuel Ax (pno)
RCA ARL1 1569 (£2·99)

One of the more menacing features of our great medical institutions, in one of which I have recently spent some time, is the musical fare provided via headphones to the helpless patients. Worse still perhaps is the good samaritan who collects 'requests' and this in turn forces one to listen in case he checks back. I asked for something classical, piano if possible, which he thought he could find. When it came it was Chopin, the Fantaisie Impromptu. It was the only classical record requested.

So, on my release it was a great delight to find, belatedly, a near perfect record to review, Emanuel Ax playing four of the longer Chopin pieces. This view is not just post-operational euphoria; the playing is really magnificent. I had heard about Emanuel Ax from friends on the Continent but have not myself heard him 'live'. This I must do as soon as I can for, if I have a slight complaint about the record it is that the sound seems a little lacking in depth, in body.

With time on my hands I was able to listen to several recordings by other artists of each of the four works. It says much for this gifted young pianist that his playing was the equal of any. A remarkable and inspiring performance. [**B : 1**] *Isla Tait*

THE CONCERT OF THE CENTURY: *A Gala concert recorded in Carnegie Hall, 18th May 1976.* (Full details in text.)
CBS Masterworks 79200④ (2 records) (£6·29)

Live 'Gala' concerts involving numerous celebrities are more often light-hearted events rather than occasions for great music making, and any tomfoolery introduced is usually visual and lost on a gramophone recording. There are the difficulties of sound to be overcome, including last minute handicaps of the balancing engineer. There is also the problem of the offensive roar and screams of applause, and audience coughs. It is to the great credit of CBS that they have overcome many of these difficulties.

The concert opens with Bernstein/NYP in an excellent, dramatic performance of Beethoven's Leonora Overture No. 3—[**A : 1**]. Then follows the first half of Tchaikovsky's Piano Trio in A minor op. 50 performed by Horowitz, Stern and Rostropovich. As heard from this record this is a travesty of all that chamber music should be. It sounds as if the three soloists were each doing their stuff without any thought of the general ensemble. The thumping of the piano in this context has to be heard to be believed. It *must* be a trick of microphone placement—I hope. [**C : 3**]. The Andante from Rachmaninoff's Sonata for Cello and Piano in G minor (Rostropovich and Horowitz) is a much happier performance and recording, apart from the hollow sounding piano. [**B : 1**]

The whole of side 3 is devoted to Schumann's *Dichterliebe* with Fischer-Dieskau and Horowitz. Accepting the recording conditions, this is first class, with the performance hovering around star quality. [**A : 1**]. Menuhin and Stern, with Bernstein at the harpsichord and members of the NYP perform Bach's Concerto in D minor for 2 violins. The sound as it opens is so poor that it is difficult to assess the performance, but it improves for the pleasing slow movement, only to revert to its harsh and rough sound in the last. [**B/C : 2**]. The rather slight *Pater Noster* of Tchaikovsky was rightly included, as it was performed under its composer during the opening concerts of Carnegie Hall. Here it is delightfully given by the Oratorio Society under Lyndon Woodside. [**A/B : 1**]

The last item, predictably, is a bit of tomfoolery, but as it involves the Hallelujah Chorus it may be considered in poor taste by some. It is sung by the Oratorio Society Choir with the vocal 'help' of Bernstein, Fischer-Dieskau, Horowitz, Menuhin, Rostropovich, Stern and the manager of Carnegie Hall (not that you can hear much of them). It must have been a riot of fun, but without vision it is a write off. [**B/C : 3/4**] *Leon Thompson*

LOUIS COUPERIN: Harpsichord pieces
Alan Curits (hpd)
DG 'Archiv' 2533 325 (£3·50)

For years, of course, Louis Couperin has been overshadowed by the other member of

the Couperin family, Couperin-le-Grand, and perhaps has been unjustly neglected. Much of Couperin's music has not survived, and after his death a large amount of autograph music was apparantly divided between his two brothers. Although the composer's harpsichord pieces now only survive in two collections, the edition used for this recording has been prepared by Alan Curtis in which he groups the pieces into the format of the seventeenth century French suite.

Each of the suites begins with an unmeasured prelude, which has a characteristically free and improvisatory quality, notated in such a way as to confuse earlier music historians and keyboard players, with the use of unconventional slurs and no rhythmic indications.

There are four suites in all, each of five or six movements, and at the risk of sounding something of a Philistine, I must confess that some of the movements struck me as a bit dull. The unmeasured preludes are played naturally with much *rubato*, but some of them seem rather uninteresting, and are evidently an aquired taste. Regardless of this, Mr. Curtis plays the music cleanly, with crisp and well executed ornamentation. The fact that the majority of the pieces are slow does not help to produce variety, and even gives a feeling of sameness about the collection.

The harpsichord used for the recording is a two-manual instrument by an unknown French maker, and meantone tuning has been used. The recording is clear and well-defined, and avoids the heavy clumping sounds that sometimes result from inadequate harpsichord recordings.

Rather a specialist issue I think, but those interested in keyboard music of this period might do well to give it a try. [**A : 1**]

Colin Evans

Fennimore and Gerda

DELIUS: 'Fennimore and Gerda'
Söderström / Tear / Cook (etc.) / Danish Radio Chorus and SO / Davies
HMV SLS 991 ④ (2 records) (£7·25)

'No work by Delius, apart from his *Requiem*,' writes Eric Fenby, 'reveals the man more faithfully as I knew him than this laconic Danish opera.' It is the last of Delius's operas and was completed in 1910. The libretto was compiled by Delius himself from a harrowing novel, *Niels Lyhne*, by the Danish writer Jens Peter Jacobsen. The opera, however, has a happy ending, for Delius breaks off with the love of Niels and Gerda, without any hint of subsequent tragedy. Fenby calls *Fennimore and Gerda* 'laconic' because it is constructed as eleven 'pictures', for the most part linked by short orchestral interludes. On present evidence, this works very well, and it strikes me as concise rather than episodic. Continuity is provided by a choice orchestral score—vintage Delius virtually all the way—and the dramatic climaxes are impressive. Still, there is something odd about the opera, and I think it is traceable to two interrelated qualities: the paucity of characterisation and the prevailing air of contemplative detachment. The whole thing is really an extended tone-poem, and as such is particularly suitable for home listening, even if some of the action is obscured: for instance, at the end of the ninth picture, the return of Erik's body and Fennimore's collapse in the snow. Such details are, of course, given in the accompanying booklet, which contains an introduction and synopsis by Fenby as well as the complete libretto. The differences between the printed text and what is sung seem to have arisen from practical improvements in the course of this production.

Made under the auspices of the Delius Trust, and in association with Danish Radio, this first recording is highly successful, both musically and technically. Meredith Davies gets splendidly idiomatic playing from the Danish Radio Symphony Orchestra, and every aspect of the performance is warmly sympathetic. It is right that the orchestral contribution be mentioned first, for it is this that lingers in the memory. The principal singers, however, work wonders with their often unyielding parts. Elisabeth Söderström sings both title-roles, which might have caused trouble but does not. Of the minor parts, Anthony Rolfe Johnson's 'Voice across the water' must be singled out for its Delian rapture. This is perfectly distanced, too. The recording as a whole is admirably balanced, warm in tone and natural in colouring. Some of the stereo placing of the voices might be quibbled over; otherwise first class. [**A : 1***]

Hugh Ottaway

LA DIVINA—THE ART OF CALLAS
Arias by Bellini, Cherubini, Cilea, Delibes, Donizetti, Mascagni, Massenet, Meyerbeer, Ponchielli, Puccini, Rossini, Spontini, Thomas *and* Verdi
Maria Callas (sop) / Various orchestras and conductors
HMV SLS 5057 (4 records) (£9·95) ® (some T)

In this album EMI have produced four records which contain many of the finest examples of Callas' genius as a complete operatic artist. She first made a name for herself singing Bellini and Donizetti roles with wonderful virtuosity, investing them with a tragic realism which gave them new life. She then added roles from the verismo repertoire and again made them something unique so that even when she was not in her best voice her portrayal of Tosca, for instance, provided an unforgettable operatic and dramatic experience.

In this collection we have examples of the pure coloratura which Callas could do magnificently, such as 'The Shadow Song' from *Dinorah* and 'The Bell Song' from *Lakme*. Her ability to colour a phrase and her deep involvement in whatever she sang are superbly illustrated in arias from *Adriana Lecouvreur* and *Macbeth*, but it is above all her singing of Bellini and Donizetti which show her at her incomparable best. She alone was responsible for a revival of interest in these bel canto composers, and so opened a new chapter in operatic history and paved the way for artists like Sutherland and Caballé to explore forgotten operatic territory.

Many of the examples chosen were originally recorded in mono and these have been processed electronically for stereo reproduction. An album giving texts and biographical details is also included. The quality of the recordings varies a little so that I think a fair overall assessment would be [**B : 1**].

John Freestone

DUKAS: La Péri / ROUSSEL: Symphony 3 in g, Op. 42
New York Philharmonic / Boulez
CBS 76519 (£3·49)

Although his *L'Apprenti Sorcier* is a tour de force, it is Dukas's opera *Ariane et Barbe-bleu* and his ballet *La Péri* which are his masterpieces. The latter, which had its premiere in 1912, is very much of its period, both in terms of its scenario and its score, but none the worse for that. Its neglect in our concert halls is sad, for of its kind it is first rate, largely taken up with the dance of La Péri herself, guardian of the Flower of Immortality.

Several versions of it are available, but this latest one from CBS in its Masterworks series, complete with its introductory *Fanfare*, takes priority. Boulez and the New York Philharmonic put it across with maximum colour, clarity, sensuousness and vivacity. I am not so sure of their performance of Roussel's 3rd Symphony, written for the 50th anniversary of the Boston Symphony Orchestra (1930). Boulez makes the most of its driving rhythms, its aggressiveness, its chunky textures and brings out to the full its athletic part-writing. At the same time, he favours a markedly 'bleached' sound quality, as it were Stravinsky in his more resolutely anti-Romantic vein. He has of course a case there, but perhaps he exaggerates it. If you should still have Bernstein's deleted version of the symphony with the same orchestra and from the same company you will hear the difference at once, especially in the slow movement. The ideal compound would be Bernstein's warmth with Boulez's analytical capacities. [**A : 1/2**]

Christopher Grier

DVORAK: Symphony 9 in e 'From the New World'
New Philharmonia Orchestra / Handley
Enigma VAR1018 (£3·49)

Vernon Handley in one of two recordings of the *New World* with the New Philharmonia to arrive this month secures a performance that avoids the pitfalls of Riccardo Muti's oversensitivity. Handley, with a strong affection for composers like Bax, might have been tempted to over-play the Romantic strain in Dvorak's music. As it is he steers a good middle course, keeping up an even rhythmic pulse with an ear firmly fixed on the structure of each movement. He judges changes of tempo very well, and is careful in his shading of the dynamics, managing to avoid brusque changes though he doesn't contrive to blend the changing timbres with the verve of Kertesz or the eloquent skill of Mehta, and the final bars of the first movement are a bit scrambled.

The Largo is nicely paced, the music following an uninterrupted line which makes Muti sound breathless by comparison, while the two remaining movements respond well to Handley's feeling for the rhythm of the music, and in his hands the finale is exciting because its ebullience and vigour are never allowed too free a rein. Surfaces of my copy are very clean but there is an audible rumble which can be filtered out with some loss of quality. Bearing in mind that the symphony is entitled '*From* the New World' the sleeve photograph of a family of immigrants, attractive though it is, is rather inappropriate. Despite the at times obtrusive tape noise, this is a very successful performance. [**B : 1**]

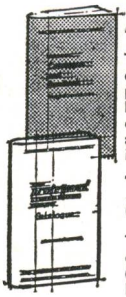
Kenneth Dommett

DVORAK: Symphony 9 in e 'From the New World'
New Philharmonia Orchestra / Muti
HMV ASD3285 (£3·59)

Two recordings of the *New World* have been released this month, both with the New Philharmonia but under different conductors. The contrast between them is quite marked, evidence that conductors do have an effect on performances after all. Riccardo Muti's stands to one side of the emotional spectrum, leaning towards the more rhapsodic aspects of Dvorak's music. His *New World* embraces the poetic, sometimes straining for a greater expressiveness than the music ideally calls for. Like Kubelik and some others he seems

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very anxious to underline passages and to attempt to create effects that, left to itself, the music is quite capable of engendering in the listener. Compared with, say, the versions by Kertesz or the recent and very successful Mehta recording, Muti's control of the music's underlying pulse is too variable for unqualified success.

He does make some beautiful sounds, and typically, his Largo is very expressive. The engineers have captured the performance very successfully, though less so than Decca did with the Los Angeles orchestra in the Mehta recording. They also managed to get a very fine *Carnival* on to side two for good measure, whereas HMV use up both sides on the symphony. For all my reservations about the performance I am sure it will give pleasure in many quarters, but my first two choices have been nominated above. **[A: 2]**

Kenneth Dommett

ELIZABETHAN AND TUDOR MADRIGALS
The Scholars (Shelagh Molyneux (mezzo) / Nigel Dixon (alto) / Robin Doveton (tenor) / Michael Leighton Jones (bar) / David van Asch (bass))
Enigma VAR 1017 (£3·49)

There are those who contend that madrigals are for singing and not for listening. True it is that madrigal-singing is one of the more enchanting pastimes, but so is listening, provided the performance be adequate. Here it is, and far more than just adequate—try Morley's 'Leave, alas, this tormenting' or Vautor's enchanting 'Sweet Suffolk Owl', but compare Morley's 'My bonny Lass', where the rhythms differ markedly from the score I used to use. We are given King's-trained discipline and tone, with a fine musical sense. Ensemble is generally sound, though there are occasionally less-than-perfect attacks.

The selection covers, on the first side, a good range—Dowland, Gibbons, Vautor, Weelkes, Mundy and Wilbye; on the second we have a recital of the works of the greatest of the English madrigalists, Thomas Morley—again, nicely chosen and balanced.

The choice of one female voice in a small, otherwise male, choir may seem curious; but it works out very well. Miss Molyneux has just the right timbre to create unity, and one is never conscious of her in other than a pleasurable way.

In days when the group was less well-known than it is now, I had the pleasure of recording it on two occasions—including some of the pieces sung here. I therefore had more than usual interest in this aspect of the disc. Apart from a strong bias to the left channel on my pressing, it is very adequate without being thrilling: the voices are clear and well-separated, and one is able to follow the intricacies which are the essence of madrigal-writing, and that even without a score. I have greatly enjoyed this record. **[B: 1/2]**

Peter Turner

FAURE: Masques et Bergamasques* / SAINT-SAENS: Carnival of the Animals
**French Chamber Orchestra / Lizzio / Munich SO / Scholz*
Pye 'Collector' GSGC15020 (£1·25)

Because of the high standards set today, we tend to dismiss any record less than superlative. Here is a 'good' record but not an outstanding one. The pianist's opening glissando raised high hopes of something new in approach, but it quickly settled down to good morning broadcast standards. The Swan, for example, is less than beguiling, but the Cuckoo in the Wood is excellent, and so on.

The Suite Faure extracted from his musical entertainment is in the form of a divertimento, opening with a brilliant and attractive overture. Much of the remaining Suite has a pleasing family resemblance to the ballet music Beecham arranged from the Handel operas. A very likeable performance. **[B: 2]**

Leon Thompson

FAURE: Chanson d'amour □ Au bord de l'eau □ Nell □ Sylvie □ Clair de lune □ Lydia □ Après un rêve / HAHN: D'une prison □ Mai □ L'heure exquise □ Si mes vers avaient des ailes □ Le Rossignol des lilas □ Offrande □ Paysage / MASSENET: Chant Provençal □ Sérénade d'automne □ Nuit d'Espagne □ Stances □ Un Adieu □ Vous aimerez domain □ Elégie
Martyn Hill (ten) / John Constable (pno)
Saga 5419 (£1·25)

This is an interesting record containing as it does some well known songs by Fauré and Hahn and some less familiar ones by Massenet, if one excepts the evergreen 'Elégie'. Martyn Hill has a well produced light tenor voice and the ability to produce a smooth vocal line well supported on the breath. Occasionally the top notes are a little open and this makes the tone too white in places, but the diction is really excellent—so excellent that it shows Mr. Hill's occasional inability to cope with the French 'u' sound as in the word 'm'enfuir'. However, this is a tiny fault and the record is full of promise. I enjoyed it very much. John Constable as usual accompanies with rare understanding and his contribution does much to ensure the success of the record. The sound is clean and the balance between voice and piano good, but I felt that the singer was possibly a little too close to the microphone and this has resulted in some rather over-emphasised sibilants. All in all this is excellent value for the money, and if Mr. Hill will pay a little more attention to covering some of the more exposed high notes he will improve further upon his impressive performance. **[B: 1/2]**

John Freestone

More Stephen Foster

SONGS BY STEPHEN FOSTER, Vol. 2
15 titles
Jan DeGaetani (m-sop) / Leslie Guinn (bar) / Gilbert Kalish (pno and melodeon) / instrumentalists / Camerata Chorus of Washington
Nonesuch H-71333 (£1·85)

This continues the good work of Vol. 1 (H-71268) in presenting the music of Stephen Foster in the correct period style with the accompaniment played on historical instruments from the Smithsonian Institution in Washington such as Foster and his interpreters would have used; a splendid Chickering square grand piano of 1850, an 1864 melodeon, flute and piccolo c. 1830, and so on. The singers have achieved 1850 type voices and altogether it is a delightful and worthy production with excellent recorded sound of true 1976 vintage. The music we accept for its artistic merits in the better pieces—which are generally those 'Ethiopian' minstrel compositions of which Foster was slightly ashamed; its historical significance in the worst—which are the sentimental drawing-room ballads with their inevitable banality even in the hands of Foster. In addition we have a piano duet *The soirée polka* and a solo *Village bells polka* to put us right in the Victorian mood. The compilers naturally suggest that everything is of unsurpassable merit, but we connoisseurs are not bothered by such considerations. We adore the bad and the good in equal measure for its own sweet and curious sake. This album is an invaluable collectors' piece and, if you like this sort of thing, you will like it verily. **[A: 1/1*]**

Peter Gammond

GLAZUNOV: Symphony 4 in E flat, Op. 48* □ 'Poème Lyrique', Op. 12 □ 'Cortège Solennel', Op. 50
*Moscow Radio SO / *Rachlin / Rozhdestvensky*
HMV ASD3238 (£3·65)

Glazunov symphonies do not remain in the catalogue very long, so those who think they might like to have No. 4 in E flat (1893) had best not delay. Frankly, I do not foresee any great demand for this record. The three-movement symphony with a scherzo at its centre contains a lot of attractive lyrical music, which is tastefully scored and agreeably shaped, but beyond that it is hard to be positive. There is nothing that cuts at all deeply or sticks in the memory. The rather earlier *Poème lyrique* might be similarly described, and the *Cortège solennel* (1895) is a short processional piece, Russian in character but only mildly arresting. The performances are all that one expects from this orchestra and these conductors—convincingly spacious and whole-hearted. The recording is a little variable. Some of the tone in the *Cortège solennel* is somewhat pinched, and in the symphony the lower strings tend to be 'furry'. On my copy the second side, which begins with the last movement of the symphony, seems rather less clear and more fatiguing. Otherwise satisfactory. **[B: 1]**

Hugh Ottaway

GUITAR MUSIC OF SPAIN
Carlos Bonell (gtr)
Enigma VAR 1015 (£3·49)

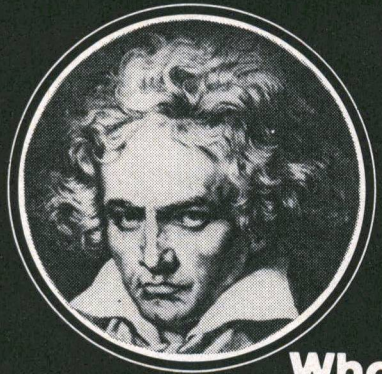
This very enjoyable recital begins with three attractive and typical pieces by Rodrigo, and proceeds with Torroba, Sanz, Sor, Pujol, Tarrega, and concludes with four folk-tunes arranged by the artist himself. All concert-hall warhorses are excluded, and the selection is representative, well-judged, varied and delightful.

Carlos Bonell is the London-born son of Spanish parents. After studying at the R.C.M. under John Williams and Stuart Dodgson, he eventually became Professor of Guitar at his old college, and has had wide-ranging success as a soloist. For a man who is still under thirty, this is some career; but listening to his playing, one cannot be surprised: he is certainly a contemporary master, with a dazzling technique, superb tone and wide control of tone-colour. He also has an almost total control of fingering-noises, which certainly avoids distraction. There are virtuoso pieces here, but clearly Bonell has preferred to demonstrate the instrument and the repertory rather than to show off for the sake of it: a wise judgment, for the result gives much more lasting pleasure. The recording here may be slightly bass-heavy (many guitar recordings refuse us that lovely rich sound which a guitar can make) but it is very good. For some reason, as with another recording from this label I have had this month, the sound has a left-channel bias—easily corrected, but it should not be there. Coupled with the fine playing and the well-chosen repertory, this is a disc for the collection of every guitar-lover. **[A: 1]**

Peter Turner

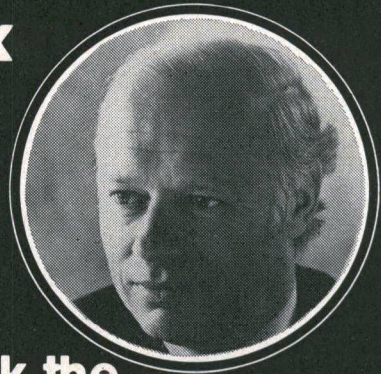
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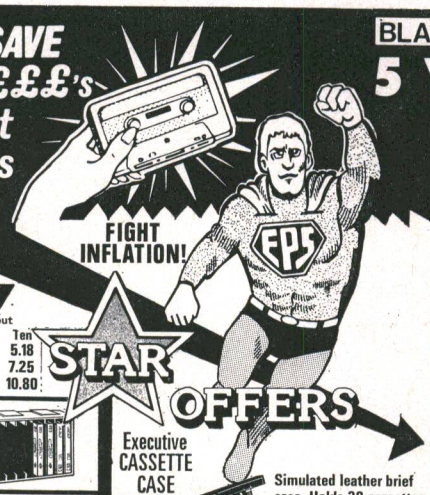
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M39

A Feast of Handel

HANDEL: 'Belshazzar'
Robert Tear / Felicity Palmer / Maureen Lehane / Paul Esswood / Peter van der Bilt / Thomas Sunneggårdh / Staffan Sandlund / Concentus Musicus Wien / Stockholmer Kammerchor / Eric Ericson (con) / Herbert Tachezi (hpd) / Nikolaus Harnoncourt
Telefunken GK6.35326 (4 records) (£13·40)

Charles Jennens' highly individual treatment of the Belshazzar legend has its origin partially in the Book of Daniel and partially in Herodotus and Xenophon. The text of his libretto (1744) is loosely based on the story of Belshazzar's downfall following Cyrus' capture of Babylon in 538 B.C.

A masterpiece of dramatic unity, the oratorio is conceived throughout in the most theatrical terms, and cries out for stage production. This facet of the work is borne out by the elaborate stage directions.

Nikolaus Harnoncourt perceptively highlights this dramatic element and in this he is at one with his soloists whose individual readings stress the operatically orientated nature of Handel's musical language. Robert Tear (Belshazzar) gives a formidable and uninhibited interpretation of the title role, while Felicity Palmer's intensely moving account of Nitocris' music offers a vivid portrayal of a tragic queen. Praise must also be reserved for the remainder of the cast. Particularly commendable are Maureen Lehane (Cyrus) and Paul Esswood (Daniel) whose imaginative and creative performances are quite enthralling.

Ornamentation forms an important part of the production, so too does the superb tone of the original (period) instruments used by the Wien Concentus Musicus. Herbert Tachezi's outstanding harpsichord continuo realisation serves to underline the sense of drama and subtly heightens the tension at climatic peaks. The Stockholmer Kammerchor which has a triple function insofar as it represents alternatively the Babylonians, The Persians and the Jews, is of a very high order with enunciation leaving little to be desired.

Although Jennen's somewhat verbose and prosaic text caused Handel to cut or prune a large number of pieces both before and after setting, I did not think the aria 'Wise Men Flatt'ring May Deceive Us' numbered among these. In this connection I was somewhat surprised at the aria's omission from the present performance. I realize that the air in question is usually thought of as forming part of *Judas Maccabaeus*, but there does seem to be some evidence to suggest that the piece was first composed for *Belshazzar*. A small point, perhaps, but a significant one.

The recording is quite outstanding and I would cite the overall production as *the* Handel recording of the year if not the decade. **[A*: 1*]** *Victor McAloon*

HAYDN: Symphony 43 in E♭, 'Mercury' □ Symphony 59 in A, 'Fire'
ASM / Marriner
Philips 9500 159 (£3·50)

It is over five years since Marriner gave us, in the 'Rise of the Symphony' album, Haydn's 52nd and 53rd symphonies (now available on one disc). I was delighted with those performances then, and welcome with enthusiasm the Academy's overdue return to Haydn —I understand they will give us a range of Haydn's nicknamed symphonies. No. 43 is not a particular favourite of mine from that prolific period (*c* 1771), but it emerges here as a strong, bright yet rich-toned piece, urgent rather than elegant perhaps; I would have welcomed a slightly more deliberate tempo for the minuet, and a rather more generous attitude towards repeats. Despite its later number in the familiar listing, no. 59 was almost certainly composed soon after the mid '60s and merely took its nickname (and supposed later date) from its association with a play given at Esterház in 1774. It receives a stunning performance—suitably fiery, yet expressive and finely controlled. The dynamic shadings are admirable, the balance so just that detail stands out with the right emphasis. The superb finale, with its excitingly exposed wind parts (both works are scored only for pairs of oboes and horns in addition to strings and continuo), reveals Haydn's ability to make so much from slender resources. Apart from the Dorati boxes, there is only an elderly version of either of these works in the catalogue, which is an additional recommendation for these finely recorded and musically exciting versions. **[A: 1]** *Peter Branscombe*

JAZZ INSPIRED PIANO COMPOSITIONS
AURIC: Adieu, New York! / BURIAN: American suite for two pianos / COPLAND: Four piano blues / DEBUSSY: Golliwog's cakewalk / GERSHWIN: Jazz piano preludes / HINDEMITH: Suite '1922', Op. 26 / MARTINU: Préludes / SATIE: Jack in the box / SCHULHOFF: Esquisses de jazz □ Rag-music
Peter Toperczer, Jan Vrána, Emil Leichner, Jan Marcol, Miklos Mikula (pnos)
Supraphon 111 1721/2 (2 records) (£4·32)

This 2-record set is worth the money simply for its curiosity value. Those of us who have an interest in both jazz and 'serious' music and are fascinated by the interplay will welcome a collection which brings together so many of the titles mentioned in connection with jazz influence on 20th century composers which, for so long, have been difficult to come by in many cases. Now we can hear for ourselves, and the lists in the appendices come to have meaning. Firstly, I must say that all these Czech pianists whose names are unknown to us—and I suspect that most of them would be fairly young though I could well be mistaken—offer excellent performances properly couched in the jazz idiom; you can make your judgement right away from the first-rate performances of two fairly familiar pieces by Debussy and Satie as the album is roughly in chronological order. The recording is more than adequate throughout.

When you turn to the music you are in an immediate tangle of reactions and prejudices. My general conclusion, lumping all such music together, is that it draws heavily on the technicalities of jazz and misses the essential feeling (with exceptions). Of course if it had all the jazz elements in proper measure it would be jazz and not 'jazz-inspired'. The watered-down or intellectualised results, whichever way you look at it, are therefore inclined to be unsatisfactory. Some of the pieces, such as Auric's, are simply boring, leading nowhere and sounding like a cabaret pianist with academic inclinations improvising before the paying customers arrive. Others choke on their own intellectualism. Amongst all the movements which have 'rag' or 'ragtime' in the title, not one ever convinces you that the composer really understood the true gentle melancholy of ragtime—or even its commercial joviality. What we look for, of course, is the subjugation of the popular idioms to create a successful and self-possessed piece which lives on its own merits—like Debussy's *Golliwog's cakewalk*. It's not jazz or ragtime but a new creation. On the whole, the composers one would expect to be best at the game are: Debussy, Satie, Gershwin (perhaps the greatest of them all in this cutting contest) and Hindemith. Copland, to my mind, just fails to be vital in this instance; and most of the others, who happen to be the more modern, are often producing nasty music. But this is all a matter of taste. What really matters is an important and interesting collection that is a welcome asset to our studies. **[A: 1]** *Peter Gammond*

SONGS AND ARIAS OF ERICH WOLFGANG KORNGOLD
From *Die tote Stadt; Much Ado About Nothing; The Private Lives of Elizabeth and Essex; Die Kathrin; Der Ring des Polykrates; The Sea Hawk; The Silent Serenade;* etc.
Polly Jo Baker (sop) / George Calusdian (pno)
Entr'acte ERS6502 (£4·25)

Listening to Korngold's film scores and even some of his major orchestral works, I have often felt that he was not quite the great composer that his recent adulation suggested. The appearance of *Die tote Stadt* (RCA ARL3 1199) made me realise his potential greatness; the present record convinces me that, as a songwriter at least, Korngold was in the top flight of composers. Strangely this is the side of him that has been least revealed of late. One critic said that Marietta's 'Lute Song' from *Die tote Stadt* was 'the last hit tune in the history of German opera'—presumably he didn't count Kurt Weill as a writer of operas. The statement may well set our brains ticking to find candidates to refute him, but we know what he meant. This is a song that composers ranging from Puccini to Richard Strauss would have been pleased to write; a song with that something that sends tingles down the spine. The record then continues with two beautifully conceived pastiche songs from *Much Ado About Nothing* and *Elizabeth and Essex*: finely shaped and showing that mastery of vocal line that seems to have left music around the turn of the century. All the fine songs on this disc made me feel that we have misplaced Korngold's reputation; he was really a great Lieder writer first and foremost, an orchestral composer second. Polly Jo Baker sings with firmness, accuracy and feeling, making the most of her excellent material, and she is warmly accompanied by George Calusdian. The recording is clear and perfectly adequate for its purpose. **[B: 1]** *Peter Gammond*

LISZT: Piano concerto 1 in E♭ □ Piano concerto 2 in A
Michele Campanella (pno) / LPO / Soudant
Pye-Nixa PCNHX 7 (£2·99)

In spite of the fact that it does not compete with DG's new issue of these two concertos in price, it is unfortunate that this should have appeared so soon after, since it would take a truly stupendous performance to efface the effect made by the Berman-Guilini recording. Yet having said this, the achievements of Michele Campanella and Hubert Soudant are far from being without merit. There is, admittedly, not the same sense of grasp or of the evolutionary unfolding of the musical arguments that Berman and Guilini bring to their task, and the results tend more to present attractive episodes rather than poetic wholes. But there is a delicacy in Campanella's playing which matches his sturdy handling of the bravura passages, and in Soudant's work with the orchestra who play well for him. There is, however, something odd about the recording itself. To my

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ear it is dull, somewhat muffled and diffuse, though when the ear gets attuned to it one can discern much of the detail. Unhappily it is not in the same class as the other version received last month, and unless one is dependent on cost I would advise going for the higher-priced DG version. I am sorry to say that I am not well enough acquainted with all the rival versions to offer a cheaper alternative, but no-one can go wrong with the DG provided they are willing to pay the price. **[B/C: 2]** *Kenneth Dommett*

MATHIAS: 'This Worlde's Joie'
Janet Price (sop) / Kenneth Bowen (ten) / Michael Rippon (bar) / Bach Choir / Choristers of St George's Chapel, Windsor / NPO / David Willcocks
HMV ASD3301 ④ (£3·65)

David Willcocks, that excellent conductor of combined choral and orchestral forces, brings his own Bach Choir to this exciting recording. Admirably balanced and spaced, it tingles with verve and vividness, the words clearly sung and the individual instruments (including organ and assorted percussion) make a realistic impact. Kenneth Bowen and Michael Rippon sing their solos with such communicative zest that I can almost forgive Mr. Rippon his lapse in pronouncing 'saw I' as 'sore eye'. Janet Price would match them if she could add more radiance, more joy to her true-toned delivery.

And the work itself? It has been cynically alleged that if you are a composer in need of performances it is better to be Welsh or Scottish than English. William Mathias, professor at Bangor, is favoured in this recording by a subsidy from the Welsh Arts Council. An English composer would hardly find comparable backers for a work which is so obviously a follower of Britten's *Spring Symphony*—not merely in its cyclical (or rather 'seasonal') construction from a choice of diverse poetry, but in actual musical utterance, especially by chorus (including boys' chorus) and brass. Britten at least avoided (as Mathias does not) the conventional Christian gloss by which worldly joy cannot be treated without 'weeping, darkness and pain'.

The work is, at least, effectively written and far from boring. A vocal score is published at £3·95 (for a mere 110 pages!) by OUP. The recording itself must be enthusiastically welcomed as **[A: 1]**. *Arthur Jacobs*

MORALES: Magnificat □ Emendemus in melius □ Lamentabatur Jacob □ Andreas Christi famulus □ Pastores, dicite, quidnam vidistis □ Jubilate Deo omnis terra
Pro Cantione Antiqua / Early Music Consort / Turner
DG 'Archiv' 2533 321 (£3·59)

This record continues the excellent series of early music recordings that Pro Cantione Antiqua have made for the Archiv label, and lives up to the others in the series in terms of performance, scholarship and sheer musicianship. Two of the motets on this record also appear on a fairly recent Telefunken record reviewed in these pages last March, performed by the Prague Madrigal Singers. The present recording, however, is superior both from the point of view of the recording quality and the singing.

The most striking music is to be found in the five motets rather than in the Magnificat, which between them cover thirty years of the composer's creative output. *Emendemus in melius* is particularly beautiful, and is given a most expressive reading which never lacks pace. But it is perhaps the profound *Lamentabatur Jacob* that is one of the highlights of the recording, and it was this work, apparently, that persuaded Turner to devote the whole of this album to the music of Morales. In this motet, the bass voices of the choir dominate, providing a rich and sonorous vocal sound.

The voices are doubled on instruments, and like the other recordings in this series, the instruments have been kept well back so that the vocal parts dominate.

This is a most useful record, which can be recommended without hesitation. **[A: 1]** *Colin Evans*

MOZART: Piano Concerto 23 in A, K488 □ Piano Concerto 19 in F, K459
Maurizio Pollini (pno) / VPO / Böhm
DG 2530 716 (£3·59)

The combination of Maurizio Pollini, Böhm and Mozart sounds promising, but it does not quite come off. Pollini's view of Mozart is rather an old fashioned one, and though one tries to ignore the pianist's long association with Chopin, that association seems to have an effect on his view of the 18th century master in something of the same sort of way as Schnabel's view of Beethoven seems to have coloured his performances of Mozart. As pianism both performances offer much to enjoy, but there is a self-consciousness about the playing that ultimately conflicts with an acceptable Mozart style.

Needless to say there is virtually no attempt to add anything in the way of embellishment to the solo part. Böhm's and the orchestra's contributions are a positive gain. The vitality of this octogenarian's conducting is a constant source of surprise and enjoyment, and his love of Mozart shines through everything he does. The concerto in F has had few recordings recently and I looked forward with great anticipation to this one. Unfortunately, in addition to the shortcomings of the interpretation to which I have already alluded, there is considerable distortion on this side of my copy. Otherwise the sound is well up to DG standard, though balance, as usual nowadays, favours the piano. **[C/B: 1/2]** *Kenneth Dommett*

MOZART: Piano Concerto No. 20 in d K466 □ Piano Concerto No. 23 in A, K488
Allan Schiller (pno) / LPO / Mackerras
Classics for Pleasure CFP40249 (£1·45)

In spite of some scholarly playing by Allan Schiller, who proffers sensible and stylish adornments to the solo line where necessary, the overall impression of these two performances is that they are rather stilted. Both soloist and orchestra seem to find it hard to relax, which means that the D minor sounds anxious rather than troubled, while the A major occasionally sounds routine or determinedly bright. A little of this attaches to Mackerras's reluctance to allow the music to spread itself, presumably in case it becomes too self-indulgent. Generally this is not a bad thing, but here I think too tight a rein is held and this in turn inhibits the soloist. Balance as usual favours the piano but the generally bright, slightly hard sound enables quite a bit of detail to emerge and we hear the important wind parts quite well. A pity that Allan Schiller was not able to put his scholarship in a more spaciously conceived frame. Routine performances perhaps, but not by any means disgraced and there are many less attractive than these at a higher price. **[B: 2]** *Kenneth Dommett*

MOZART: Fantasia and Fugue in C, K394 □ Variations on 'Ein Weib ist das herrlichste Ding', K613 □ Piano Sonata in B♭, K333
David Ward (pno)
Saga 5435 (£1·50)

An unusual programme and a welcome one. Avoiding conventional choices, David Ward offers three pieces, not necessarily among the greatest of Mozart's piano music, that rarely feature in the concert hall. I have always had a soft spot for the variations, a charming, simple-structured compound theme with lots of variety. This was the last piano music Mozart wrote, and it seems to belong to the world of Papageno. The Sonata has appeared on Mozart recital records, though not as often as its merits justify, and the Fantasia and fugue, written by all accounts to please his wife, is something of a mixed blessing.

The fantasy has remarkable power, but the fugue, like most of Mozart's exercises in this form, sounds uncomfortable. David Ward, however, gives it a stimulatingly convincing performance. In contrast the sonata sounds unduly careful. The opening Allegro is taken at a deliberate pace which makes it sound restricted and shorn of the *élan* to be found in the performances by Walter Klien, for instance, or Christoph Eschenbach. Ward's performance is consistent though, and he carries his concept through to the finale. But the result is disappointingly staid. The variations go better, yet even these could do with a touch more *brio*. The recording is clean and the sound lifelike. **[A: 2]** *Kenneth Dommett*

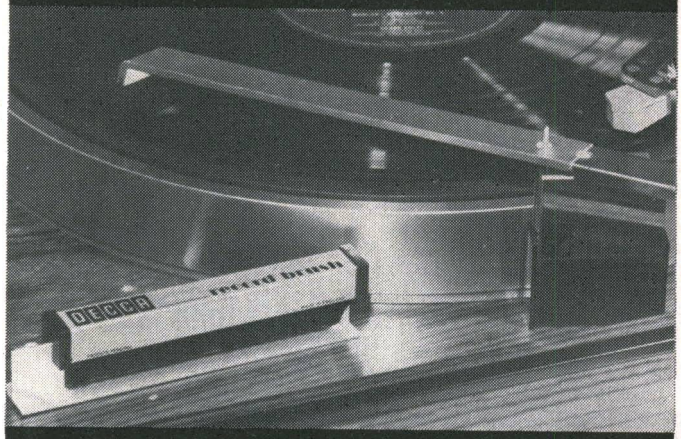
Two minimozart operas

MOZART: Der Schauspieldirektor, K486 □ Lo sposo deluso, K430*
Ruth Welting, Felicity Palmer, Ileana Cotrubas (sop) / Anthony Rolfe Johnson (ten) / Robert Tear (bar)* / Clifford Grant (bar) / LSO / Davis*
Philips 9500 011 (£3·50)

Lo sposo deluso is one of two fragmentary essays in opera composition that Mozart occupied himself with between *Die Entführung* and the *Marriage of Figaro*. An opera buffo in intent, the outline plot offers little beyond conventional fun and games, and it was perhaps this conventionality which persuaded Mozart to set it aside until something better came along. What there is of it is included in this excellent performance. In fact there is rather more than Mozart himself left us, for that indefatigable and very skilful Mozart scholar and, if he will pardon the word, pasticheur, Erik Smith, has provided orchestration for the two uncompleted arias. As we know from other occasions, Erik Smith has a great flair for making his 'Mozart' sound uncannily like the real thing, and the uninitiated would, I fancy, find it difficult to spot the joins.

Musically the most interesting of the four items are the overture with its attendant quartet, and the final terzetto which generates a strong feeling for dramatic and comic invention. The other side is devoted to *Der Schauspieldirektor*, better known as The Impresario. Shorn of its tedious dialogue, this one-acter glows with the genius of Mozart at the peak of his career. Musically it offer many marvellous touches of orchestration and the two arias are splendidly conceived as miniature musical portraits. Ileana Cotrubas, doubling in both operas, is particularly noteworthy in an excellent cast, while

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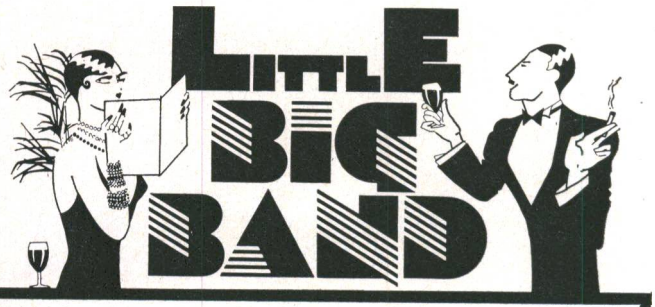
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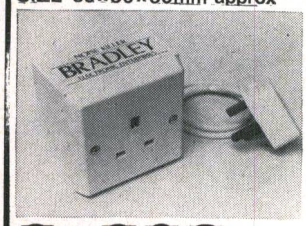
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Kenneth Dommett

OBOE MUSIC
BELLINI: Oboe concerto in E♭ / MOLIQUE: Concertino in g / MOSCHELES: Concertante for flute, oboe in F / RIETZ: Konzertstuck in f
Heinz Holliger (ob) / Aurele Nicolet (fte) / Frankfurt RSO / Inbal
Philips 9500 070 (£3·50)

An enjoyable and interesting trio of oboe concertos, and a charming and delicate work by Moscheles—with a lot of unison writing, or simple repetition of phrases passing between oboe and flute. Holliger has recorded the Bellini before, and his new version easily surpasses the de Vries/EMI version in refinement both of performance and recording. It would be a pleasure to listen to Holliger whatever he was playing, and in the concertante work Nicolet makes a perfect partner: the two soloists sound as if they thoroughly enjoyed matching each other, and blending. Neither soloist is balanced too far forward; however, the orchestral textures are recessed and somewhat cloudy. The accompaniments under Inbal are excellent, but the sound isn't quite ideal for these scores. [**B: 1**]

Christopher Breunig

ORFF: 'Carmina Burana'
Norma Burrowes (sop) / Louis Davos (ten) / John Shirley-Quirk (bar) / Brighton Festival Chorus / Southend Boys' Choir / RPO / Dorati
Decca 'Phase 4' PFS 4368 (£3·35)

No sooner had my rave review of the Leipzig/Kegel version on 9500 040 appeared in print (*HFN/RR*, October '76, p. 160) than yet another *Carmina Burana* came in at the door! This is in a different class, both as a recording and as a performance. The recording style is fairly typical of Decca 'Phase 4', with perhaps an even greater emphasis on clarity, immediacy and closeness than is usual. If you like everything just in front of you so that you have an illusion of being able to reach out and almost touch the musicians, then you may well get very excited about this record. For myself, I find it monotonous and rather wearing, and I very much prefer the sensitive perspectives of the Philips version—on musical grounds and also for comfort in listening. Pre-echo rears its ugly head repeatedly, so an overall **B** seems not ungenerous.

The performance lacks subtlety. One or two numbers are heard to remarkable effect—for instance, No. 13, 'Ego sum abbas', which is given a very distinctive interpretation—but Dorati's approach seems to me over-deliberate; *tempi* tend to be slow, and some numbers move heavily. Norma Burrowes has an appealing lightness of touch in No. 21, 'In trutina', but in general the performance is not notable for its rapture. [**B: 1/2**]

Hugh Ottaway

Starred overtures

OVERTURES—VERDI: 'The Force of Destiny' / BEETHOVEN: 'Creatures of Prometheus' / BERLIOZ: Roman Carnival / GLINKA: 'Russlan and Ludmilla' / BRAHMS: Academic Festival / ROSSINI: 'Thieving Magpie'
Cleveland Orchestra / Maazel
Decca SXL6782 (£3·50)

Collections of overtures are very popular and exist in great numbers because, I presume, such records present an attractive programme of short pieces. For such a record to be an outstanding success it must follow a well trodden path; its music must be varied, each item attractive and each superbly performed and recorded. This Cleveland/Maazel is just such a record. The Verdi and Berlioz go right to the top of the lists, the Brahms 'Academic' is given just the happy lighthearted performance the composer wished for it. Indeed all the performances are delightful. I made an immediate note A*: 1*, but whenever possible with such a rating I give it further consideration. Listening again purely to the sound it became apparent that there were odd moments when the resolution dropped and instrumental detail became a little confused. There was also an occasional pre-echo, so with a poor heart I give this first class recording a finicky rating of [**A/A*: 1***].

Leon Thompson

Attractive Palestrina

PALESTRINA: Missa Aeterna Christi munera □ Oratio Jeremiae Prophetae □ Sicut cervus desiderat □ Super flumina Babylonis □ O bone Jesu
Pro Cantione Antiqua / Bruno Turner
DG 'Archiv' 2533 322 (£3·59)

There are some excellent performances on this record from an accomplished group of singers, and although some of the works are not new to the catalogue the record is a very welcome release. The Mass takes up the first side of the record. Written for four voices, the vocal lines are unusually clear and this recording uses only two singers to a part emphasising the transparent quality of the music. This is a restrained performance, and there is a striking feeling of poise and control in the vocal work, particularly from the counter-tenors Esswood, David and Smith.

Palestrina wrote five complete settings of the Holy Week Lessons from the Lamentations of Jeremiah, even though the Lamentations belong to those lessons traditionally intoned in plainsong. For this reason, perhaps, Palestrina's setting of the text is unusual, using comparatively simple homophonic writing for the greater part of the text. The result is strangely compelling, and the pathos of the words emphasised by the use of one voice to each part. This short work (it is only 11 minutes in length) is undoubtedly one of the highlights of the album: there is almost an ethereal quality to the voices on the words *Incipit Oratio Jeremiae Prophetae*, and the tightness and precision of the ensemble makes for a most rewarding performance.

The singers have been placed at a comfortable distance, in the eminently suitable acoustic of All Saint's Church, Petersham. Perhaps the singers could have been brought forward just a little, but this could well have lost the feeling of perspective, and diminished the slightly remote quality of the music which makes this record so attractive. [**A: 1***]

Colin Evans

POULENC: Gloria* □ Piano Concerto**
**Norma Burrowes (sop) / **Cristina Ortiz (pno) / *CBSO Chorus / CBSO / Frémaux*
HMV ASD3299 ④ (£3·65)

Here are the two faces of 'Janus' Poulenc. His Piano Concerto (1949) represents him as an engaging and sophisticated entertainer, incorporating into its finale 'Swanee River' and the Brazilian maxise rhythm. This disconcerted the Boston Brahmins who first encountered the concerto under the baton of Charles Munch. It is really a Divertimento, full of good tunes, and steering well clear of Higher Edification—which doesn't mean that it lacks in any way Poulenc's customary craftsmanship. Played with relish and polish by Cristina Ortiz and the CBSO, it is the only recording at present available.

For interest's sake I compared it with a long deleted Felsted version made by Annette Haas-Hamburger, and the Pasdeloup Orchestra under Dervaux. Technically, that now sounds dated, yet the actual playing is in some respects livelier than on the modern issue. That also applies to the *Gloria*, representing Poulenc in his 'holy' vein. Unquestionably Frémaux produces an excellent performance from the well-trained Birmingham forces together with exquisite solo singing from Norma Burrowes. Yet I would still prefer the slightly rougher, more urgent and more vivid performance, also on HMV, given years ago by the French National Radio Orchestra and Chorus under Prêtre, with a patently 'operatic' singing from Carteri. I wonder which version the composer would have favoured. [**B: 2**]

Christopher Grier

PUCCINI: 'Tosca'
Vishnevskaya / Bonisolli / Manuguerra / Zerbini / Guggia / Maazzini / French Radio Chorus / French Radio Children's Chorus / French National Orchestra / Rostropovich
DG 2707 087 (2 records) (£7·18)

Tosca was once described as a shabby little shocker. The comment is unkind, but not entirely unfounded. Puccini had a vivid sense of theatre (which is *not* the same thing as drama). He knew that a powerful *theatrical* effect such as Scarpia's outburst of erotic frenzy (which, combined with a massive choral ensemble brings Act I to a resounding close) could swamp any doubts we might have regarding the dramatic truth of what we had seen and heard. Yet characters too thinly founded but too powerfully projected and many dramatic questions left unanswered often leave unease, doubt and deep-seated dissatisfaction after we leave the opera house. These qualities, reinforced by Puccini's insistence on a few peak moments to supercharge with emotion, set problems for a recorded production. Do we emphasise (and at times expose) the drama or do we skate over the problems with fine singing and sweep the doubts under our mental carpet? Both approaches have their advocates and merits, but practicality (that faithful servant of the stage!) usually dictates a random mixture of the two. Such is the present recording.

Franco Bonisolli as the hero Cavaradossi is pleasingly warm-voiced: *Recondita armonia* is nicely musing and he can also summon a tenor's strident, trumpeting tone. Such traditional vocal virtues are enough for a traditional tenor role, but they prove inadequate to portray the sadistic Baron Scarpia. Matteo Manuguerra lacks vocal weight and far too often 'sings' his way across the meaning and power of the words. When he addresses Tosca for the first time he might—for all we can *hear*—be a true lover or genuinely pious. His *Va'*, *Tosca! Nel tuo cuor s'annida Scarpia* (Act I) is mellifluous—and weak where (Oh! inevitable comparison!) Tito Gobbi is a vertiable Hound of Hell. Galina Vishnevskaya is much better. *Visi d'arte*, beloved of sopranos and audiences alike, is finely sung and if it does sound like a concert aria and detaches itself from the dramatic

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context, this is in part Puccini's fault. But this well-known aria also exposes a weakness: Vishnevskaya's Italian is noticeably studied and foreign in its intonation. At worst it exaggerates her distinctly dramatic interpretation into blustering melodrama as in her *Quanto? . . . Il prezzo!*, demanding of Scarpia the cost of her lover's freedom. Vishnevskaya's view of the heroine's character is intense and dramatic, but, sadly, she misses many a verbal point. Once again a comparison comes to mind, for the interpretation is in the same vein as that of Maria Callas, but I fear that the achievement falls short of that great classic. On the positive side of this variable issue lies Rostropovich's conducting—well paced and often beautifully expressive. **[A : 2]**

Benedict Sarnaker

Distinguished Rachmaninov

RACHMANINOV: Songs
Elisabeth Söderström (sop) / Vladimir Ashkenazy (pno)
Decca SXL6772 (£3·50)

A companion to SXL 6718, by the same artists, this is an important addition to the extensive Rachmaninov catalogue at present available. More than that, it is a glorious record for all who enjoy the solo song with piano accompaniment. I find these performances immensely satisfying. Elisabeth Söderström is a truly lyrical singer of the utmost artistic integrity; there is never any suggestion of histrionics, or of a shallow professional gloss, and this genuineness is matched by the beauty of tone and phrasing. The last note of the second song on the first side is a trifle strained; otherwise these performances are virtually unblemished. Ashkenazy is a surprisingly sympathetic accompanist—surprisingly, that is, for so idiosyncratic a solo pianist—and his contribution very strongly underlines the stature of many of these songs. There are 16, presented in chronological sequence, and no more than six appear to be otherwise available. The titles are as follows: *In the Silent Night*, *So many hours, so many fancies* both from Op. 4; *The Soldier's Wife*, *A Dream* (Op. 8); *I wait for thee*, *The little Island*, *Midsummer Nights*, *The world would see thee smile*, *Believe it not!*, *Spring Waters* (Op. 14); *Fate* (Op. 21); *Day to night comparing went the Wind her way*, *Arion*, *The Raising of Lazarus*, *So dread a fate I'll ne'er believe!*, *Music* (Op. 34).

The Kingsway Hall recording is outstandingly fine in all respects. There are one or two touches of hard, wiry piano tone—for instance, at the end of the last two songs on the first side—and there are heavy tracking demands in nos. 3 and 5 on the second side. But the overall quality is so distinguished that a second star is irresistible. **[A*: 1*]**

Hugh Ottaway

SAINT-SAENS: Piano concerto 1 in D, Op. 17 □ Piano concerto 5 in F, Op. 103
Phillipe Entremont (pno) / Orchestre du Capitole, Toulouse / Plasson
CBS 76532 (£3·49)

From the outset, CBS's Masterworks series has been commendably enterprising. It has confined itself neither to gilt-edged music nor musicians. Take the present issue as an example. Saint-Saens' 1st Piano concerto might not rank as a star attraction in the average concert programme—and at the moment only Ciccolini's two recordings of it are in circulation—but it is worth hearing occasionally. The 5th Piano Concerto is another matter altogether. That too is neglected, but it is an infinitely more interesting work, one which ought to be aired much more often than it normally is in this country. Though I am not always a one hundred per cent fan of Entremont, here he makes out a most impressive case for the concerto's merits. Clearly he feels some sort of rapport with the composer. (He has already recorded the 2nd and 4th concertos.)

The Orchestre du Capitole, Toulouse and its conductor, Michel Plasson are, unlike the Toulouse Chamber Orchestra, newcomers to the catalogue and unknown here. Maybe they are not going to knock the Orchestre de Paris out of business, but they sound most competent, as indeed they should for, predictably, the actual recording is excellent. **[A : 1/2]**

Christopher Grier

SCARLATTI: Sonatas
Colin Tilney (hpd)
Argo ZK5 (£2·50)

Domenico Scarlatti's keyboard sonatas are so numerous (he composed about 550 of them) that a list of those included on this record may be of use to prospective purchasers. Listed by their Longo numbers and in the order that they appear on the record, the sonatas are 223, 309, 135, 257, Supp 3, 283, 188, 436, 480, 187, 137, 3, 316, and 17. His sonatas occupied the last twenty years or so of Scarlatti's life, during which time he was employed by the Spanish courts. The works are not only particularly significant in the history of keyboard music, but among them explore every resource of harpsichord technique. Some pieces, as anyone who has tried to play them will be aware, are of formidable difficulty, while others make considerably less technical demands.

Even among the fourteen sonatas on this record, there is quite a wide range of colour and expression. Descriptive touches like the shepherds' bagpipes in L. Supp 3, and the imitation of Spanish guitarists in L 135, are typical.

Colin Tilney's performance comes off well: he plays the *allegro* sonatas with panache and a tight and precise feeling for rhythm. There is an Italianate feel to the sound, although some of the playing might strike some as a bit heavy and graceless. Evidently Mr. Tilney is emphasising the gutsiness of the music, and if this is the case, it certainly comes off. The harpsichord used for the recordings is itself rather interesting, being a Sodi instrument built in Florence in 1782. Apparently the instrument has no hand stops, and registers can only be changed when the jack-rail has been removed, thus making colour changes during a piece impossible. The instrument has a very powerful snarling bass register that is unmistakable.

Perhaps the recording is a shade on the close side: the instrument sounds somewhat elephantine but this could well be due to the overpowering bass register. The effect is a bit oppressive, and I personally would have preferred a less aggressive recording. **[B : 1]**

Colin Evans

SCARLATTI: Sonatas
Valda Aveling (hpd)
HMV HQS 1365 ④ (£2·50)

The eleven sonatas included on this record, more than anything else, show Domenico Scarlatti to be one of the most stunningly original keyboard composers of the early eighteenth century. The sonatas have presumably been chosen for their contrast and kaleidoscopic range of colours and musical images—but rather than played as individual pieces, some of them have been grouped into pairs, or in one case, into three movements. This is evidently what Scarlatti intended, and to facilitate identification, the sleeve-notes quote both the Longo numbers and the newer 'K' numbers, the latter standing not of course for Köchel, but for Kirkpatrick, who some years ago assembled all of Scarlatti's 555 sonatas into an approximate chronological order.

For those collectors who want to avoid the almost inevitable duplication of sonatas, a list of the contents by Kirkpatrick's cataloguing may be useful. They are K28, K208, K209, K490, K491, K492, K52, K123, K133, K544 and K545.

Having tried to fumble through these sonatas myself when a music student, I am not a newcomer to this music, but Valda Aveling's remarkable readings of the works inspired me to dig out my faded copies of the music and re-acquaint myself with some of the sonatas. Miss Aveling, as far as I am concerned, has breathed a new and vibrant life into them. There is a buoyant sense of rhythm, and in the slow movements, the discreet *rubato* is executed tastefully and sparingly. Miss Aveling has obviously all the technical expertise necessary, but also the ability to bring out qualities in the music that are not always obvious. The recording is excellent, one of the most pleasant harpsichord recordings I have heard for a long time. And at this price, the record is a bargain indeed. **[A*: 1*]**

Colin Evans

SCARLATTI: Sonatas for Harpsichord (Vol 3)
Gilbert Rowland (hpd)
Keyboard Records KGR1003

This the third volume in the ambitious task that Keyboard Records have set themselves in recording the 555 keyboard sonatas written by Domenico Scarlatti, and should prove equally as welcome as the first two records. The recording engineer has captured the sound of the harpsichord, a modern copy by Michael Robertson, with great fidelity and effective ambience. The image is realistic, especially with a Hafler set-up, although the sound is occasionally spoilt with a small amount of recorded rumble, which might very well be mechanical noise from the harpsichord.

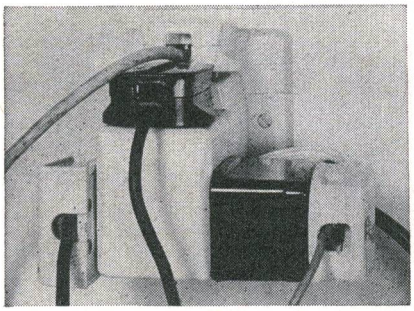
Gilbert Rowland has a very clean technique and contrives to keep the sometimes surprisingly chromatic texture clear without a cold over-analytical approach and manages shimmering scale passages and awkward trills with a seeming ease. He is following the suggestion by American scholar Ralph Kirkpatrick that the majority of the sonatas, which are mainly in one movement, should be played in pairs sharing the same tonality; it is also Kirkpatrick's numbering system that is used in this series. **[B : 1]**

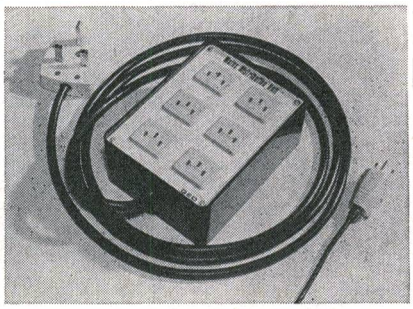
John Atkinson

SCHUBERT: Liebesbotschaft □ Ständchen □ Fischerweise □ An Silvia □ Auflösung □ Der Wanderer an den Mond □ Die Sterne □ Wanderers Nachtlied □ Bei Dir Alleine □ Die Forelle □ Ganymed □ An die Musik □ Ueber Wildemann □ An die Laute □ Der Einsame □ Dass sie hier gewesen □ Der Schiffer
Ian Partridge (ten) / Jennifer Partridge (pno)
Enigma VAR 1019 (£3·49)

One gets the feeling here that the Partridge duo were really trying for some very special performances—and for most of the time they achieved them. I found it a fascinating recital,

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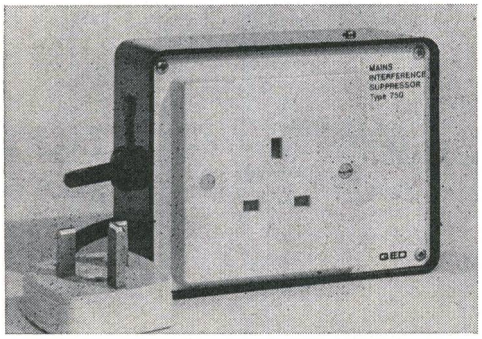
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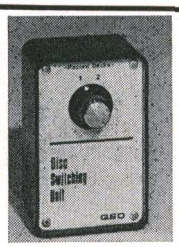
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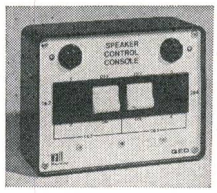
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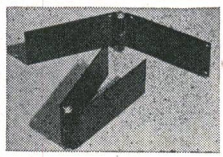
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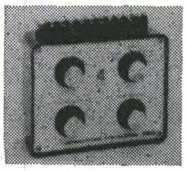
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full of vitality and adventure, from the performance viewpoint; and furthermore, although the repertoire is fairly hackneyed and aimed at a wide audience, I found myself listening with keen anticipation to how they would handle each new favourite. I don't want to suggest that Ian Partridge has gone out of his way to be different, but simply that, with the advantage of a regular partnership, they have tried to elevate each song to its potential peak by discovering the right balance, tempo, poise—and so on. One of the rare failures, though only by the highest standards, seemed to me to be *Die Forelle* where they never settled into a decided approach and therefore lacked conviction. But mostly they succeeded, not a little of the success due to Jennifer Partridge who provided such energetic and rhythmical accompaniments. I felt that the recording was by no means perfect. When voice and piano were at a moderate level all was well and the sound, on the whole a natural one. But when the piano played forte, the singer tended to get swamped, and when the singer sang pianissimo he tended to get lost. In other words a fine adjustment of the balance between voice and piano could have put everything right. At times the sound seemed very good, and it was never less than a standard that allowed me to enjoy this most attractive recital. **[A/B: 1/1*]**

Peter Gammond

SIBELIUS: Symphony 1 in e, Op. 39 □ 'Scènes Historiques', Op. 25
Bournemouth SO / Berglund
HMV ASD 3216 ④ (£3·65)

This is a very impressive record and only narrowly misses two stars. Both performances are strong, clear and well considered, and the First Symphony comes across as the major achievement that it is: none of the Romantic nationalists, not even Dvořák in his Seventh Symphony, achieved a sonata form more powerfully constructed than Sibelius's opening movement. There is plenty of atmosphere, too, and at times an engaging lightness. An occasional feeling of heaviness in the way the music moves is enough, perhaps, to warrant the withholding of a star, but this should not make prospective buyers hesitate. The positive qualities declare themselves at once and are amply sustained.

The recording is nothing if not vivid. There is an arresting impact, without loss of clarity, and even the heaviest demands of timpani and brass have been safely accommodated. My only reservations concern the distancing and some of the dynamics. The sound source seems sufficiently close for the loudest passages to become a little overbearing, and while there is a wide enough dynamic range, there is some inconsistency in its use. For instance, in the slow movement, the repeated wind chords accompanying the solo cello immediately before letter F, though marked *pp possibile*, are heard as a prominent *mp*. In other respects, however, the recording is of the highest quality and can be happily recommended. **[A: 1]**

Hugh Ottaway

A TAPESTRY OF MUSIC FOR ROBIN HOOD AND HIS KING
St. George's Canzona / John Southcott
Enigma VAR 1020 (£3·49)

A collection of musical bits and pieces connected with the Robin Hood legend seems an attractive idea, and there is plenty of variety on this record, even if some of its connections with Sherwood Forest seem a bit tenuous.

Sir Robin Hood, Earl of Huntingdon, who is generally credited with having rallied the oppressed during the reign of Richard I, has inspired many greater and lesser mortals to compose stories and music telling of his supposed deeds, many of which have no doubt suffered the inevitable embroidery of time.

Most of the music on the record is interesting, and is presumably intended for entertainment rather than for musicologists to ponder upon. Whether the players were aiming for a rustic style of performance I don't know, but rustic it is, even to the point of meandering intonation and inelegant playing. The music may well give an impression of jolly lads camping it up under the greenwood tree, but even Little John would wince at some of the dismally out of tune playing. The dances are perhaps the best contribution to the record, and the songs in an *à la taverna* style have much more impact than the precious reading of Cornyshe's *Ah Robin*.

The recording quality too leaves something to be desired. Although the stereo spacing is quite pleasant, the sound is often uningratiating and by today's standards, must be considered less than perfect. **[C: 3]**

Colin Evans

Starred Nutcracker

TCHAIKOVSKY: 'The Nutcracker'
Concertgebouw Orchestra / Dorati
Philips 6747 364 (two records) (£4·76)

Antal Dorati, who worked with the Monte Carlo *Ballet Russe* in the 1930s, has recorded the complete 'Nutcracker' twice before. His 1955 Minneapolis set was superseded by a further Mercury production with the LSO, in 1963 (reissue reviewed Nov. '75).

Unlike Ansermet, whose pacing of the ballet is essentially steady, Dorati favours fast tempi: consequently the Concertgebouw playing is not always completely tidy. The overture, for instance, does not make an immediately winning impression, although much of the playing in later movements is splendidly rousing. The harpist is outstanding. Here and there are hints of Dorati's old ruthless efficiency rather than warmth. Is it my imagination, or do the Concertgebouw play *Nutcracker* with a certain curiosity? I admit I associate the orchestra with dignified symphonic works, rather than a score demanding such lightness and brilliance in the execution. The recent EMI reissue of the Bolshoi/Rozhdestvensy version had an engaging warmth, a feeling for tradition and 'effectiveness' of presentation, whereas here the predominant atmosphere is one of freshness.

An attractive account then, with some superb moments. Similarly the recording, with the *Concertgebouw* ambience well in evidence, has thrilling moments of 'star' quality, if basically it is 'very good'. (Sample the end of *Waltz of the flowers* for the best sound.) The price is exceptionally low too. **[A/A*: 1/1*]**

Christopher Breunig

Accardo's Tchaikovsky

TCHAIKOVSKY: Violin concerto in D, Op. 35 □ Sérénade Melancolique, Op. 26 □ Valse Scherzo, Op. 34
Salvatore Accardo (vln) / BBC SO / Colin Davis
Philips 9500 146 (£3·50)

It is good to hear Accardo on Philips in other than Venetian concertos. Only last June I reviewed Grumiaux's new coupling of the Tchaikovsky concerto and *Serenade* (also Philips)—I was disappointed in Krenz's relatively sluggish beat, especially in the finale. There are no such reservations about Colin Davis, a keen accompanist, although arguably the NPO woodwind solos are more elegant than those of the BBC SO here. Incidentally, like Grumiaux, Accardo does not make the traditional cuts in the finale.

Predictably he relishes the virtuoso writing of the *Valse Scherzo*, and he gives a passionate account of the *Serenade*: a very different approach from Grumiaux's, which suggested delicate wistful qualities. Davis brings out the slavic sound.

Accardo gives a compelling account of the violin concerto; one or two details of interpretation will not please everyone (say, the deliberate variations in stress in the last line of the cadenza, finale around 40), and his little trick of 'breathing' on the strings could become tiresome. In this intensity he ignores a few dynamic shadings indicated. But these are minor matters when the approach is so committed, the intonation so astonishingly secure. Definitely amongst the very best modern recordings.

The sound resembles the Grumiaux, although the degree more of hall ambience in the NPO production makes me suspect a different setting was used for Accardo. The balances are very similar, the soloist's tone gruffer than the Belgian violinist's—an extended range in the orchestral strings would have earned this issue a star. **[A: 1/1*]**

Christopher Breunig

VERDI: 'Macbeth'
Milnes / Cossotto / Raimondi / Carreras / Bernardi Ambrosian Opera Chorus / NOP / Muti
HMV SLS 992 (3 records) (£9·95)

Verdi's first opera on a Shakespearian plot, *Macbeth* caused the composer many problems and some of these remain problematic today. First performed in Florence in 1847, Verdi revised it for a staging in Paris in 1865. The first version was both earthy and obvious in its effects—and placed a very heavy burden on the baritone who sang Macbeth. The revision places greater emphasis on Lady Macbeth and the Witches and ends with a triumphal chorus rather than Macbeth's death. In all these changes it reflects Verdi's middle period manner and should be judged as such. Verdi rated Macbeth very highly and was mortified by its failure in Paris where it was judged bizzare, monotonous and vulgar. Without doubt it is central to Verdi's development, yet for all its probing towards a new, more dramatic view of opera, it strikes me as a limited, obstinately 19th Century view of Shakespeare. Verdi sensed the problems and (before revising it) complained: 'I glanced at *Macbeth* ... and was struck by things I would have preferred not to find there. In short, there are various pieces which are either weak or—which is even worse—lacking in character.'

Macbeth on record has also had mixed fortune. Many great singers have recorded it, sometimes happily (e.g. Callas; Rysanek/Warren) sometimes less so (Nilsson; Souliotis/Fischer-Dieskau). Now, within months of each other, we have two splendid

new recordings. The Verrett/Cappuccilli/Abbado (DGG) was reviewed in October—and the competition is fierce. The outstanding performance of the EMI set is Fiorenza Cossotto's Lady Macbeth. Though she lacks Shirley Verrett's dark, unflinching vocal power, Cossotto's utterly idiomatic inflection and pointing of words is gripping and projects a more vivid sense of personality than her rival. With Macbeth the balance tips the other way. Sherrill Milnes is very fine, accurate and with a sharp sense for words—the purest professionalism, but he sounds detached when compared with Cappuccilli's deep, lyrically brooding Macbeth. In the other roles the honours are about even. In recordings, texts and conductors the matter is more equivocal. Abbado keeps a better musical flow and has the sharper, clearer recording. He uses the 1865 text, but (following a precedent set by Fritz Busch) inserts Macbeth's death aria from the first version. Muti keeps to Verdi's second version, solving the textual problem more sensibly by including the three most important 1847 numbers (which Verdi dropped) as a filler on the final side. On the Minus side, Muti, seeking emphasis and weight, digs too deeply into the rhythms and deprives them of their spring. The EMI recording is warmer, but the DG has more impact. [**A : 1**] *Benedict Sarnaker*

VERDI: Operatic Recital, 12 items including: Ah, la paterna mano (Macbeth) □ Quando le seve (Luisa Miller) □ Questa o quella and Donna è mobile (Rigoletto) □ De miei bollenti (Traviata) □ Ah si, ben mio and Di quella pira (Trovatore) □ Celeste Aida □ Dio! mio potevi and Niun mi tema (Otello)
Carlo Bergonzi (ten) / NPO / Santi
Philips Universo 6580 150 (£1·99)

From what I can gather from the brief notes supplied, this recital is made up from three full priced records published in 1975, but, so far as I can trace, they have not been available in UK.

Carlo Bergonzi has been delighting us now for nearly 25 years. He is a superb artist of great technique and musicianship. He started his career as a baritone, and this may account for his firm middle and lower register, which he combines with a clear tenor range. This present recital is thoroughly representative of his wide range of accomplishments, and should afford listeners very great pleasure. [**A : 1**] *Leon Thompson*

WEBER: Songs
Martyn Hill (ten) / Christopher Hogwood (fortepiano)
Oiseau-Lyre DSLO523 (£3·50)

No record in the Weber anniversary year will be more welcome than this delightful postscript. Twenty-five songs—about a quarter of his total output of *Lieder*—are here presented with infectious wit, enthusiasm and style, a well-chosen and balanced programme that gives an excellent introduction to a neglected side of his art. Mercifully, there is little overlap between Martyn Hill's programme and the half-record devoted to Weber in Robert Tear's recital issued in the summer (which I have not heard). There are real jewels here among pieces that are never less than felicitous. Most are short, even when strophic or with simple variations in the stanzas; melancholy and humour are probably the predominant moods, though the beauty of some of the melodies will linger in the listener's mind. A feature of the record is the Haschka fortepiano (Vienna, circa 1825) on which Christopher Hogwood plays his lively and perceptive accompaniments—its Turkish pedal is used to brilliant effect in 'Reigen' to suggest the round-dance's rustic accompaniment. The valuable booklet, with full notes on the songs by John Warrack and an informative paragraph on the piano by C. F. Colt, also includes full texts and translations (though there are rather a lot of misprints). Voice and piano are well recorded, with nice balance if some surface noise. Mr. Hill needs to work at his German diction and to strengthen his low register, but he is a very musicianly, alert Lieder-singer—and in 'Mein Schatzerl' he has an irresistible yodel. Warmly recommended. [**A/B : 1/2**]
Peter Branscombe

THE WORLD OF JOSEPH COOPER, Vol. 2
Decca SPA473 (£1·89)

This record is every bit as enjoyable as his best-selling Vol. 1. The first side is devoted to another piano recital. The music Joseph Cooper has chosen this time is not quite so firmly established in the standard repertory, and is obviously aimed at a more popular audience. Nevertheless he treats each number with respect and the performances are never trivial. Included are such well known items as 'Rustle of Spring', *the* Rachmaninoff Prelude, and 'The Maiden's Prayer' but he also adds in the mood of his Vol. 1 the Adagio from Beethoven's 'Pathetique', Dohnanyi's Third Rhapsody and Debussy's 'The Girl with the Flaxen Hair'. All are very well played.

Side 2 should be *very* popular, for here he gives us nine of the famous 'Hidden Melodies' which he features in his TV programme 'Face the Music'. They are nicely balanced between very easy and more difficult, so no one should feel left out. Excellently recorded. [**A : 1**] *Leon Thompson*

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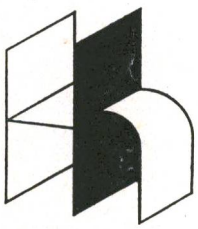
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Déjà Vu

A reissue roundup conducted by Richard Anthony, John Atkinson, Christopher Breunig, John Crabbe, Peter Gammond, Geoff Jeanes, Paul Messenger, and Leon Thompson

HELIODOR 2548 255 (£1·35) brings us **Beethoven's** 5th together with the *Fidelio Ov.* with Bavarian RSO/Jochum. Surprisingly it is a disappointing issue. The performance of the symphony is not convincing, for in an attempt to make it impressive, it is 'over-acted', full of underlinings and variations of tempi. Such a supreme work can well stand on its own legs. The performance of the overture is a very fine one. The recording is thin and dated. [**B/C : 2/3**].

Beethoven's Symphony 5 and *Fidelio Ov.* are on Philips Universo 6580 145 (£1·99). This coupling duplicates the programme on Heliodor 2548 255, reviewed above. Both are performances by Jochum, but on this Philips disc he is with the Concertgebouw Orchestra. It comes from Jochum's integrated Beethoven set issued Christmas 1969, and is very well recorded. Again there is the occasional overpointing, but on this record it is quite overshadowed by the majestic performance of the huge bulk of the symphony. The bridge passage linking the 3rd and 4th movements, for example, is magnificently conceived, performed and recorded. The *Fidelio* is very good. [**A : 1/2**].

The version of the **Chopin** Piano concerto 1 by Tamas Vasary (DG 'Privilege' 2535 206, £1·98) has always been highly regarded. First issued in 1965 it remains one of the best performances with BPO/Semkow providing a perfect accompaniment to Vasary's insight. The recording has a smooth and pleasant sound. As a bonus, Mazurkas 5, 44, 47 and 54. [**A : 1**]

An attractive disc couples **Chopin** arr. Douglas *Les Sylphides* and **Delibes** *Coppélia* ballet suite (DG 'Privilege' 2535 189, £1·98) first issued in 1961. Who better than the BPO and Karajan to swirl us through this romantic and velvety music with no holds barred. The recording still sounds good enough for [**A : 1**].

Pye GGCD304 (£2·50) is a double album containing **Dvorak's** Symphonies Nos. 7, 8 and 9, with the Scherzo Capriccioso and 3 Legends, all performed by Barbirolli and the Hallé. The recordings date from 1958–1960 but are now not such good sound as when originally issued. The Symphonies are at their best during the quieter moments but disintegrate (D) at periods of climax, as the ratings indicate. Scherzo [**C : 1/2**]. The Legends both as recordings and performances were preferred to the shrill, top priced, Leppard/Philips disc. [**B : 1**]. Symphony No. 9—'New World' [**A/D : 2/3**]. No. 8 [**A/D : 1**]. No. 7 [**B/D : 2**]. The long accompanying sleeve notes are excellent.

A valuable selection of **Grieg**'s music is on Decca SPA421 (£1·50). The two well-filled sides include *Peer Gynt*—incidental music Op. 23, *Sigurd Jorsalfar*—incidental music, both by LSO/Fjeldstad; *Holberg Suite* with Münchinger and the Stuttgarters; and 'Cowkeeper's Tune and Country Dance'—Mackerras/LSO. A feast of good popular music excellently played and recorded. [**A : 1**]

Neville Marriner and the Academy present a 1965 vintage hamper of **Handel** on Argo ZK2 (£2·50). Titbits include the *Arrival of the Queen of Sheba* and the *Overture to Berenice*, while Roger Lord is the soloist in the Three Oboe concertos. The strings have the warm rich Academy sound, but perhaps lacking suitable aggression in places, and one suspects overdone close-miking of the oboes in 'Sheba'. Otherwise, an excellent well-recorded album. [**B : 1**]

Maurice André has recorded the **Haydn** Trumpet concerto at least three times; this reissue (RCA Erato STU70652, £2·99) is welcome for its inclusion of the delightful overture to *L'incontro improviso* as well as the Sinfonia concertante. Mr. André plays brilliantly, but poor recorded balance and a rather thin tonal spectrum lessen the impact of his performance and Guschlbauer's alert and sympathetic direction. [**C : 1**].

On Argo ZK6, a new mid priced series (£2·50), we have three Concertos by **Haydn**, the Trumpet, the 1st Horn concerto in D and the Organ concerto in C. Stringer, Tuckwell and Preston respectively are the soloists, all with Marriner and The Academy. This is a collection of the plums from three first class, rave reviewed, demonstration standard records. The Trumpet is perhaps Haydn's most popular concerto, but all are attractive works. To have three such superb performances on one silent surfaced record of outstanding quality is a bargain indeed. [**A : 1***].

There has been a demand for the return of the **Hely-Hutchinson** *Carol Symphony* to the catalogue and here it is, a warm evocation of Christmas, with Barry Rose conducting the Pro Arte Orchestra (HMV 'Greensleeve' ESD7021, £2·50). The backing is the **Vaughan Williams** *Fantasia on Christmas Carols* and arrangements by V W and **Warlock** with the Guildford Cathedral Choir. An unhackneyed record of its kind that will offer an in-depth backing to the festivities. The 1966 recording still sounds excellent. [**A : 1**].

Calling itself **Mahler** 'Symphonies 1–10', being in fact 1–9 and the *Adagio* from 10, CBS GM15 (15 records, £25) features Bernstein with NYPO/LSO and is an impressive box set with no less impressively-detailed booklet. Original dates are, average, late 60s to early 70s. Bernstein's is an interesting set of readings in generally good recordings. Certainly things are bright and exciting with good cleaning-up of the sound throughout, impressive range and solidity, and even that notorious Eighth sounding quite well. For a total rating **A/B**/(8th) **C**, with overall **1**. A fine way to get hold of Bernstein's Mahler, at an excellent price, with surprisingly pleasing sound and immaculate surfaces. Nice one.

The **Offenbach**-Rosenthal *Gâité Parisienne* is backed by the **Strauss**-Desormière *The Blue Danube* ballet suite (Heliodor 2548 248, £1·25) in delightful gay, foot-tapping performances by the Berlin Radio Symphony Orchestra conducted by Paul Strauss. The recordings, though dating back to 1959, are very pleasant to listen to, clear yet warm-sounding, really ideal for the music. A most enjoyable issue. [**A : 1**].

Based on ballet-theme of Süssmayr's, **Paganini**'s *Le Streghe*—short virtuoso piece for violin and orchestra, with eerie harmonics—provides tempting makeweight to Violin concerto in D. Accardo's brilliant version, with LPO/Dutoit (from DG 2740 121), now separately available in improved transfer: 2530 714; £3·59. [**A : 1**].

Prokofiev's *Alexander Nevsky* is performed by Thomas Schippers conducting the NYPO on CBS 61769. This exciting work is dramatic both in performance and recording quality, although in places it suffers from over-forward brightness. With slight tonal adjustment this 1967 production is acceptable for £1·99. [**B/C : 1**].

Ansermet and the OSR's 1961 recording of **Rimsky-Korsakov**'s *Scheherazade* has been re-released on Decca 'Ace of Diamonds' SDD496 (£2·50). This is a sparkling recording with the percussion sounding very exciting in the last movement, but the strings lacking warmth overall. Quite a bonus as filler is a clean version of **Borodin**'s *Polovtsian Dances*, but unfortunately with a soggy choir. Nevertheless, very good value for money. [**A : 1/3**].

A collection of **Rimsky-Korsakov** including *The Golden Cockerel*, *May Night* Overture, and extracts from Alexander **Borodin** and Michail **Glinka** are reissued from 1961–65 DG recordings (Heliodor 2548 247, Lamoureux/Markevitch, £1·35). Although vintage, these are high quality recordings and performances. If the choice of the R-K items appeals, the package can be warmly recommended. [**A : 1**].

Very disappointing account from Manuel Cubedo and the Barcelona SO, previously on Contour, of **Rodrigo**'s *Concerto de Aranjuez* on Pye Collector GSGC 15030 (£1·25). The recording is poor with an artificially prominent guitar and the orchestra sounding as though it is behind a heavy curtain. Coupling is a rare recording of the Guitar concerto in A minor by the 20th Century Spanish Composer Salvador **Bacarisse**. [**D : 2**].

'Starred' **Saint-Saëns** *Carnival of the Animals*, Kontarskys/VPO/Böhm (HFN Feb '76), retransferred with Nash verses eliminated, has Mozart's *Eine kleine Nachtmusik* as coupling—new, if short measure (DG 2530 731; £3·59). That hardly counts when you have Böhm's concentrated reading, the music chirrupy one minute, dark-tinged the next, so beautifully realised. In the murmured repeats in the *menuetto* the Vienna strings are like liquid gold. [**A : 1***].

All the way from '63 comes a recording of **Tchaikovsky**'s 6th Symphony, the *Pathétique*, from Antal Dorati and the LSO on Philips Universo 6582 014 (£1·99). A workmanlike performance and good recording, but sometimes a little distant, making the brass and percussion impressive at the expense of the woodwind. [**B : 2**].

Milstein's 1960 (Capitol) recording of the **Tchaikovsky** Violin concerto, Pittsburgh SO/Steinberg, now coupled with *Valse Scherzo* and Glazounov's orchestrations of *Meditation* and *Scherzo* (Op. 42: 1/2) (HMV SXLP30225; £2·20)—fillers with anonymous orchestra cond. Irving—displaces all bargain competitors. A thrilling, masterful account, still of acceptable sound. [**B/C : 1/1***].

Pas de Deux (Decca SPA487, £1·89) as one might guess, takes



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one into the ballet world to enjoy some of its memorable duets in musical form. Predictably the three Tchaikovsky ballets are involved, supported by *Don Quixote* (Minkus) and *Giselle*. It is the latter that most powerfully portrays the sweet and silly world of ballet, full of gusto and seam splitting rhythms. A popular programme, well directed by Bonynge, Ansermet and Martinon and sounding good. [**A/B : 1**].

Beethoven's Symphony 2—*Egmont* Overture (Decca SXL 6761) and Symphony 5—Leonora Overture (SXL6762) are the latest releases in the Decca-Solti (CSO)—Beethoven cycle. These works are taken from the 1975 boxed set, with the highest sound quality maintained. There is little more to add than thoroughly enjoyable and highly recommended. Individual price £3·50. [**A* : 1***].

Chamber/Solo

A recital of **Bach**'s popular organ works including the Toccata and Fugue in d is on Decca SPA459 (£1·50). They are 'big' performances by Karl Richter at the Organ of the Victoria Hall, Geneva in what is now considered a rather old-fashioned manner, but for many no less exciting and desirable. What wonderful recordings Decca made as far back as 1956 and 1960, for on this attractive reissue they sound almost as if made only yesterday. [**A : 1**].

The Juillard Quartet perform Beethoven's six Opus 18 string quartets on CBS 77362 (3 record boxed set £5·99). Dating from 1970, the sound is close and dry, giving the viola in particular a scratchy quality; the performance is, in general, excellent. [**B : 1**].

Outlasting Kempff's or Rubinstein's, Clifford Curzon's 1963 **Brahms** F-minor piano sonata, with *Intermezzi* Op. 117:1/119:3, offers warmer, more lyrical alternative to the magnificent Arrau/Philips. Now more attractively priced as Decca SDD 498 (£2·50). [**B : 1***].

Ingrid Haebler performs **Mozart**'s Piano Sonata in A, K331, on Philips Universo 6580 153 (£1·99) which, of course, contains the Rondo Alla Turca which pops up in various guises everywhere. The 1966 recording is a little reverberant but not unpleasantly so. Coupling is the Allegro and Andante K533 with the 'Little Rondo' K494, which together form a sonata in F with which Mozart aquitted a debt to his publisher, but this no way means that this is inconsequential music. [**B : 2**].

The CBS catalogue is fortunate in having a rich crop of classic **Schubert** performances and we are fortunate that they have as their Classical Promotions manager, the learned and loquacious Ray Burford who is a dedicated Schubertian and intends to issue them. Rudolf Serkin's reading of the A major Piano Sonata, D959 (CBS 61645, £1·99) is indeed a classic, profound, expressive, revealing the Schubert of the Sonatas as a composer of Beethovenian stature. Unhurried, detailed, rising to mystic heights in the questing *andantino*, scintillating in the *scherzo*; we have here a startling revelation of both performer and composer. Satisfactory recording. [**A : 1***].

Vocal/Choral

THE first release in Argo's new midprice series is the live recording of **Britten**'s *Noye's Fludde* from the 1961 Aldeburgh Festival, on Argo ZK1 (£2·50). This has always been one of the best live recordings available, transporting the listener to Orford Church in Suffolk, and the entry of the animals into the Ark, all singing their *kyrie eleisons* to the blaring of a bugle band, is magic. The recording is so true to life that this reviewer was a little disturbed by the stamping of the raven's feet as it circled the stage looking for dry land, but this is minor quibbling—a marvellous record. [**A* : 1***].

In most respects the complete recording of **Lehar**: *The Merry Widow* under Karajan was an excellent one. Elizabeth Harwood was perhaps oddly cast as the English lead to an otherwise German production; and she lacked both the sparkle of Schwarzkopf and the natural lilt. The orchestral work by the Berlin Philharmonic is superb. Substantial highlights (DG 2530 729, £3·59) are an expensive buy but the recording is first-rate. [**A : 1**].

Highlights from **Leoncavallo** *I Pagliacci* and **Mascagni** *Cavalleria Rusticana* are taken from the 1966 Karajan recordings (DG 'Privilege' 2535 199, £2·15) with Bergonzi in two of the key roles. These were firm, literal performances, fresh, vigorous and dramatic, amongst the very best ever, so the seeker after a modest meal will be well served. Recording is well-balanced though a bit on the quiet side. [**A : 1/1***].

Decca Box D10D4 (4 records with libretto (£9·95) contains what was in 1960 the first really complete recording of **Mozart**'s *Don Giovanni*. It has an excellent cast including Cesare Siepi: The Don, Leontyne Price: Elvira, Cesare Valletti: Ottavio and Fernando Corena: Leporello. In fact the only question mark, and that a little one, is against Birgit Nilsson, the Donna Anna. The opera is dramatically produced with stage effects, and brilliantly directed by Erich Leinsdorf who conducts the VPO. The sound, while not exactly of 1976 quality, is so good that never for a moment does it mar one's enjoyment. Nicely presented with splendid pressings. [**A/B : 1/2**].

The incomparable King's College Choir, directed by David Willcocks, perform four **Palestrina** pieces, including the magnificent 8 part *Stabat Mater* on Argo ZK4 (£2·50). It might be thought a little daunting, a whole album of *a cappella* music, but both recording quality and performance are excellent and the cool serenity of Palestrina's part-writing is allowed to shine through. [**A : 1**].

If there is any poor soul who feels he cannot afford a complete *Die Fledermaus*, Johann **Strauss**' most resplendent and vivacious score, and does not possess either splendid version by Carlos Kleiber or Boskovsky, he may console himself with highlights from Boskovsky's excellent fully Viennese-flavoured version (HMV ASD2891, £3·20). The meat is there if not the full story and it is still highly entertaining. Good warm sound. [**A : 1***].

A full-blooded and witty French version of **Saint-Saëns'** *The Carnival of the Animals* with Prêtre and the Paris Conservatoire Orchestra (HMV 'Greensleeve' ESD7020, £2·50) is coupled with the **Poulenc** (orch. Françaix) *The Story of Babar* with Peter Ustinov as the avuncular narrator. The only version of this charming but not quite memorable modern score, it should have had the right sort of Christmas sales. [**A : 1**].

Argo ZK3 (£2·50) features a 1964 selection of 19th century English Cathedral Music sung by the Choir of St. John's College Cambridge directed by George Guest. Spacious recording does justice to a collection of austere works by Walmisley, Goss, and the Victorian organist S. S. Wesley, who contributes four of the eight anthems, magnificats and motets. There is a small degree of recorded rumble. [**B : 2**].

The World of Opera, Vol. 2 (Decca SPA450, £1·89) ranges through *Rodelinda*, *Figaro*, *Barber of Seville*, *Aida*, *Nabucco*, *Traviata*, *Rigoletto*, *Tannhäuser*, *Carmen*, *Tosca* and *Butterfly* alighting mainly on what you might expect, including possible alternatives, from each glittering source. Decca's rosta of opera stars is well displayed in recordings ranging from 1958–1970, all of reasonable quality. The new seeker after opera will have an enjoyable and informative time. [**A : 1/1***].

The World of Operetta Favourites draws from previous issues featuring Boskovsky, Lorengar, Gueden, Ansermet, Crespin, Sutherland and Krenn (Decca SPA466, £1·89) to present a very good and very varied operetta selection, about 80% entirely predictable favourites, but in excellent performances and recordings. 'Vilja', 'Lippen schweigen', 'Nuns' chorus'; 'Heart's delight' —they're all there and they continue to delight. [**A : 1/1***].

Miscellaneous

Recently Alan Keith gave his listeners an opportunity to recast their votes for the **100 Best Tunes**. Not too surprisingly, to our mind, the fickle public, ousted 34 items from the old list and supplanted them with new favourites. So Decca are now issuing three new discs in addition to the original ten, of which Vol. 1 (Decca SPA491, £1·89) is now before us. Enter the *Traviata* Prelude, Tiny frozen hand, Haydn Serenade, Bizet *Fair Maid of Perth*, Elvira Madigan, Lonely heart, etc., all in excellent performances and sound. [**A : 1**].

Three-disc **Art of Pablo Casals** (HMV RLS723 Ⓜ, £6·60) comprises famed Brahms *Double concerto* with Thibaud cond. Cortot; Boccherini in B-flat (LSO/Ronald); piano trios by Mendelssohn and Schumann (Thibaud, Cortot); disc of trifles but including Beethoven 'Bei Männern' variations [**H : H**]. New-to-LP 'centenary tribute' may contain hair-raising portamenti swoons—essentially from violinist colleague—but heart-warming music making. Rewarding set.

'Encore' is the title of a collection of four items on Heliodor 2548 249 reissued from DG 1959–1961 (£1·35). These comprise Smetana's *The Moldau* (BPO/Fricsay), Tchaikovsky's *Capriccio Italian* (BPO/Leitner), Liszt's *Hungarian Rhapsody* (Bamberg SO / Kraus) and Strauss' *Emperor Waltz* (Berlin Radio SO/Fricsay). These are high quality transcriptions which only show their age in their level of tape-hiss. The stereo image seems occasionally slightly constricted but the depth perspectives are admirable. The performances likewise are consistently good and this is enhanced by the recording quality. [**A : 1**].

Superb ASM/Marriner/Argo Festival of English Music (D26D4, 4 records, £8·95) contains 1976 Butterworth *Shropshire Lad*, *Banks*, *Idylls*, Britten *Bridge vars*; 1972 Tippett *Double String* concerto, *Corelli* fantasia, *Little Music*, V W *Tallis*, *Greensleeves*, *Lark*, *Dives & Lazarus*; 1968 Elgar *Introduction*, *Sospiri*, *Serenade*, *Elegy*, *Spanish Lady*. On such a big collection only an overall rating can be given, and this is **A/B : 1**, but mostly **A**. Rich, clean and spacious sound: a fine and very recommended English music concert.

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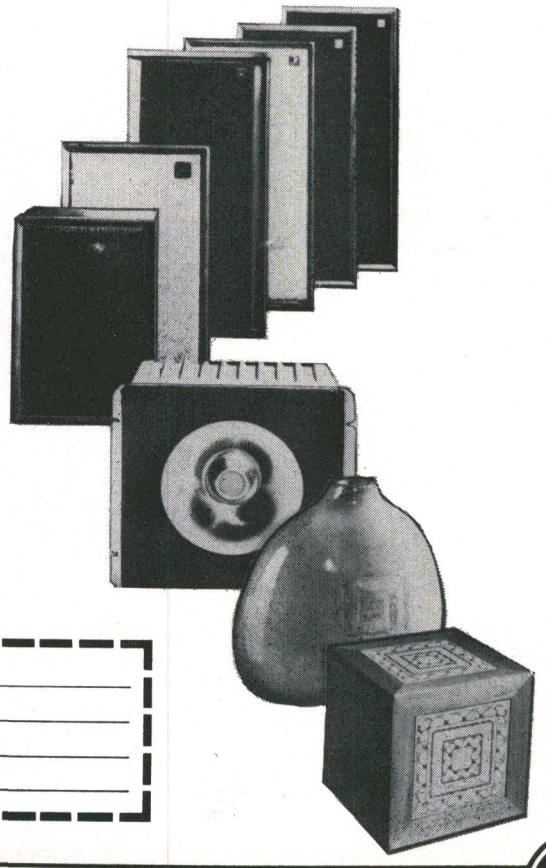
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Peter Gammond

BACH to BUTTERWORTH

THE ideal that we most often seek in musical performance surely lies somewhere between the two extremes of utmost authenticity and excessive theatricality. Only too often the ordinary music-lover must feel that the specialising musicologist is over-concerned with matters of style and textual minutiae and forgets that what we really want in performance is warmth and humanity. The populariser leans much too far the other way. The great performances and performers are those which add to the bare bones of the composer's score the non-musical ingredients of compassion, humour, tragedy, that bring music into the orbit of everyday life. This, to me, is what comes over in a record of **Bach** Arias (EMI TC-ASD3265, £3·75) that combines the unique artistry of Janet Baker and Neville Marriner. They will forgive me for pointing out that the purists may well frown on their dramatised conclusions, the generally emotive approach, the liberties with the text. In spite of which, to people like myself who often find Bach too rarified in certain academic productions, Bach comes over on this recording with a friendly warmth and meaning that suddenly presents the music in a new light. If there are stylistic faults, from a narrower point of view, there are deeper and more enduring qualities from the general standpoint. Rating it in terms of pure enjoyment, and adequate sound—[**A : 1**]. The **Bach** organ works played by Richter in a 'World of the Great Classics' issue (Decca KCSP 459, £2·25) come over with an impressive impact. Dating from 1960 the recording has a dynamic quality that is immediately convincing but which, on analysis, is found to have a woolly bass rather than a clearly articulated one. It is still of a quality to make an exciting introduction to the world of Bach's organ music played by a great organist [**B : 1**]. **Bartok's** *Concerto for Orchestra* has ceased to be a difficult modern piece and has become a popular classic with a substantial number of recordings to its credit. Mehta's new recording, perhaps unexpectedly, is not one of the aural dazzlers but a fairly introspective performance combining orchestral skill and finesse (Decca KSXC 6730, £3·75). A good performance and recording, then, whose attraction may also be the rare coupling of the *Hungarian Pictures* [**A : 1**]. Ormandy's reading of the **Beethoven** *Choral* (CBS 40-61747, £2·29) is solidly spectacular, a good American performance. The 1967 recording is not perfect and the tape is slightly noisy. There is altogether too much echo around [**B : 1/2**].

Solti's new recording of **Bizet's** *Carmen* (Decca K11K33, £9·95) must, I think, now be accepted as the best all-round offering. This doesn't mean that we need relinquish our allegiance to the richly lyrical and personal Los Angeles/Beecham set or Bernstein's interesting new thoughts on the subject. But Solti gives us all the richness of *Carmen* without eccentricity and has an excellent Carmen in Troyanos. The orchestral playing is superb. It makes one wonder all over again why any generation found it possible not to be bowled over immediately by this tremendous opera. As with *Die Meistersinger* last month I found a remarkable difference between the disc and tape sounds. I think our reviewer's assessment of an A probably right for the disc, which gives the impression of having its treble curtailed; the cassette has a much sharper quality to it which gives a great impression of clarity and impact. It's the cassette version, that I shall be playing for my own pleasure, which merits [**A/A* : 1/1***]. Barenboim's **Berlioz** tape (CBS 40-76524, £3·19) contains much of musical value, some things of more variable quality. Mainly excerpts from *Romeo and Juliet* with the more romantic sections handled best. The recording also seems to vary in quality [**B/C : 1/2**]. Klemperer's **Brahms** Symphony 1 (EMI TC-SXLP30217, £2·45) is strong and noble, a well-established performance but the recording is rather congested and especially in the louder moments (the opening for example) sounds very thick with no real detail [**B/C : 1**]. I have no hesitation in recommending all and sundry to get the Marriner recording of **Britten's** Frank Bridge Variations, even more so for the **Butterworth** pieces on the other side which never fail to move me with their cool beauty (Argo KZRC860, £3·75). Some lovely playing and an excellent recording whose only disadvantage is that so many quiet moments allow the minimal tape noise to obtrude [**A : 1***].

CHABRIER to FRANCK

Chabrier *España*; **Debussy** *L'après-midi*; **Ibert** *Escales*; **Ravel** *Daphnis et Chlöe* suite 2 make up a nice programme of French music by Barenboim and the Orchestre de Paris (CBS 40-76523, £3·19). Barenboim indulges occasionally in his habit of mooning around, but balances it with lively and sensitive playing, especially in the Ibert. Good but variable recording [**A/B : 1/2**]. A totally recommendable performance of **Dvorak,** *New World* symphony and *Carnival* from Mehta and the Los Angeles Philharmonic (Decca KSXC6751, £3·75). This is the tape version to get, with a wonderfully clear and rich recording to enhance a tremendously exciting but well-controlled performance [**A : 1***]. The **Elgar** collector is particularly well-served this month with no less than four interesting issues. Firstly, Jacqueline Du Pré in a live 1970 performance of the Cello concerto with Barenboim conducting (CBS 40-76529, £3·19): a performance of remarkable intensity even compared with her classic studio performance, which is coupled with an excellent *Enigma* which Barenboim plays straight. The cello may seem excessively highlighted but this is the only serious criticism [**A/B : 1/1***]. Secondly a scintillating performance of the Violin concerto from Zukerman and Barenboim which no-one who loves Elgar should miss (CBS 40-76528, £3·19): a great musical experience, a very adequate recording [**A : 1***]. A re-issue of Silvestri and the Bournemouth Symphony is always interesting and his readings of Elgar's *In the South* coupled with Vaughan Williams' *Wasps* overture and *Tallis* fantasia (EMI 'Greensleeves' TC-ESD7013, £2·75) will please many. Fine performances but a somewhat shrill and edgy recording dating from 1968 which is nonetheless clear in detail [**B/C : 1**]. Finally the *Enigma* variations from Solti (Decca KSXC6795, £3·75) in a hard-pressed performance that is not entirely suited to the work, to my taste anyway. Undoubtedly a virtuoso reading with splendid playing and well recorded but I felt it to be a mite too pressurised. I was disturbed by some noises near the beginning that sound like Solti intoning a note or two. Coupled with the *Cockaigne* overture [**A : 1/2**]. **Franck's** Symphony seems to be doing well lately and I much enjoyed a new reading by Andrew Davis which seems to show special insight and an ability to keep things always on the move and full of detailed interest (CBS 40-76526, £3·19). The *Pelleas and Mélisande* suite of **Fauré** is also beautifully handled [**A : 1/1***].

HANDEL to RACHMANINOV

I leave it to the previously assaulted purist to find fault with certain speeds and balances, which I understand, but myself I shall just revel in Marriner's truly splendid new **Handel** *Messiah*, not only for a recording of impeccable quality and clarity, but for what is basically an immensely enjoyable, musical and joyful recording of this much revered work (Argo K18K32, £9·95). One comes to love and admire it all over again, in spite of uncountable amateur performances, when it comes out with such fresh and fertile impact as it does here. And it happens to be based on the first London performance of March 23rd 1743. Whacko, I say, and a happy 25th birthday to Argo and its discerning director and founder Harley Usill [**A* : 1***]. A new recording of the ballet music from **Massenet's** *Le Cid* and **Meyerbeer's** *Les Patineurs* (Decca KSXC6812, £3·75) comes out of the speakers with such phoney brilliance that it is almost funny. Well, if this was done to Mozart, I would cringe, but somehow it doesn't seem too wrong for the exuberant score of *Les Patineurs* and I rate it accordingly. Basses as big as buses, violins that nearly cut your head off, altogether a riot of recording technique that bears no relation to any live orchestra ever encountered. Be warned but enjoy some exuberant performances to match [**A : 1**]. I have recently lost count of *Carmina Buranas* but still love the sophisticated flamboyance of this **Orff** score. This new 'Phase 4' version from Dorati (Decca KPFC4368, £3·60) recorded in the Kingsway Hall last February will take some beating in terms of vitality and impact. I can see some raised eyebrows [*see p. 113*—**Ed**] but I enjoyed every minute of it. A joyful, irreverent performance, indeed, with a stunning recording to match [**A : 1**]. The brilliance of Perlman and Williams in splendid guitar/violin duos by **Paganini** and **Giuliani** could hardly be questioned (CBS 40-76525, £3·19). I was able to enjoy this tape in spite of an atrocious recording. It is so forward that even the two instruments sound congested and I am surprised that Perlman allowed his violin to be recorded so that it sounded like a tea chest [**C : 1**]. **Rachmaninov** joins the 'Favourite Composer' Club (Decca KDPC 565/6, £2·25 each) and with artists of the calibre of Solti, Katchen, Ashkenazy and Boult to state his case, is in good hands: an excellent collection [**A : 1**].

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ROCK



Fred Dellar

AS it seems that I'm destined never to review Stevie Wonder's **Songs In The Key Of Life**—last month my copy got lost somewhere in Geepeeohland, this month I've received a replacement that's pressed more like corned beef—I feel the next best thing to do is to recommend an album that is, in its own way, of equal importance. Can it be by Bowie, Stewart or Lennon? you ask. Well no—it's actually by a band known as 801, the album being titled **801 Live** (Island ILPS9444, £3·50). Now I suppose I'd better explain that 801 is really a kind of a Roxy offshoot, conceived by Eno and Phil Manzanera. And on the evidence of this recording, made at the Queen Elizabeth Hall, last September, the band—Eno (vocals/synthesiser etc.), Manzanera (guitar), Bill MacCormick (bass/vocals), Francis Monkman (keyboards), Simon Phillips (drums) and Lloyd Watson (slide guitar/vocals)—would appear to be somewhat more interesting than Roxy itself at this point in time. M & E's *Miss Shapiro* is, for instance, a beaut of a track, throwing up lyrical images faster than a well-executed Hindu shuffle. Then, just when you're set and mentally motoring along with the band, a familiar riff is thrown up like a detour sign and you're off down déjà-vu alley, via a Surformed version of the Kinks' *You really got me* that works amazingly well. 801 is a band that really likes to stick its head out. Not content to zoom through originals like *Third uncle* and *Baby's on fire* in a manner that leaves the listener hung up with jet lag, they even have the audacity to present a version of the Beatles' *Tomorrow Never Knows* that somehow retains the mystic charm of the original yet has that additional something that is very much a part of 801. And any band that pulls off something of that nature—as 801 successfully do—goes immediately to the top of my 'bands to look out for in '77' listing. I suggest you put them on yours. [**A/B: 1***]

Larger Than Life (Warner Bros. K56283, £3·29) is a compilation that has hi-fi connotations in that the sleeve is little more than one glorified plug for Wharfedale speakers. But while the music is generally of a high quality—Maria Muldaur's *Midnight at the oasis*, Candi Staton's *Young hearts run free*, Jesse Colin Young's *Songbird* etc.—the sound quality, though never less than good, does vary over the very wide spectrum of tracks presented on the album. Which makes you wonder why Wharfedale chose to link their name with the project in the first place. [**B: 2**]

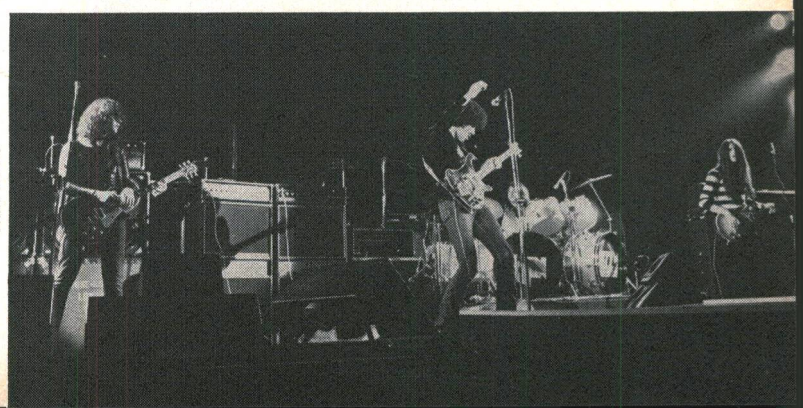
Far better, I feel, would have been to laud the virtues of Chevins, Dovedales, Airedales, Lintons and Dentons via another Warner release, namely **Sparkle** (Warner Bros. K56248, £3·29) a film soundtrack affair featuring the voice of Aretha Franklin and the music of Curtis Mayfield. Viewed as a Franklin album, I'll admit that it's a trifle disappointing—Detroit's favourite soul-sister sings in her usual high-flying, magnificent manner but Mayfield's songs are, for the most part, little more than routine, come-on-and-get-that-church handouts—however, the rhythm section cuts through like a North Atlantic icebreaker and if I'd have been in Rank-Wharfedale's Brentford ops room I'd have tried to have hung my campaign around something like Sparkle. Imagine—the sanctified sound of Aretha and Wharfedale—now that's what I call a concept! [**A*: 2**].

Although the release of the recent Flamin' Groovies album, by Sire, wasn't quite the event I'd hoped for, it brought about one satisfactory result in that Pye have been prompted to issue the Groovies' **Teenage Head** (Kama Sutra KSMD101, £3·50), which is actually a double-album containing not only the original 1971 LP of that title, but also **Flamingo**, an album cut by the Groovies during the previous year. Flamingo itself is a very underrated affair. Recorded in San Francisco, with Richard Olsen (from the Charlatans) as engineer and Commander Cody as guest pianist, it's a heavily Stones-influenced effort which often rocks in classic fashion. As for Head well, that was a very much hailed recording at its original point of issue, being rated by many critics as better than the Stones' **Sticky Fingers**, which came out around the same time. Though the recorded sound is not all that it might be—the Groovies idea of a dream recording involves cutting a session on a two-track deck in the late Joe Meek's front room—the music is vital, fresh and utterly without pretence. If you've a penchant for genuine sixties-type rock, flavoured with just a few 12-string strumalongs and other odd happenings, then **Teenage Head** is a must not to be avoided. [**C: 1***]

The success of Thin Lizzy must be encouraging to those bands whose natural habitat currently seems to be either a sweaty, flea-pit of a dance-hall or—on the long haul home—the greasy-spooned caff. For Lizzy have shown that it's possible to come up the hard way, short on type and long on talent, and still break through to become the kind of upper-class attraction whose albums go into the charts immediately upon release. Certainly **Johnny The Fox** (Vertigo 91012, £3·50), Lizzy's latest, seems destined to emulate the sales achievements of the band's previous **Jailbreak** chartbuster, though judged in terms of sheer musicality, I'd rate it as a better proposition. The thing about Phil Lynott's lively little foursome is that you just can't label their work as *heavy* and leave things that way. Y'see, Lynott, who surely must be one of our most distinctive rock vocalists, is also something of a dreamer—which is why he can produce both books of poetry and tracks like *Old Flame* and *Sweet Marie*, which drift lazily amid Brian Robertson and Scott Gorham's swirling guitar figures. It's to be hoped, that now Lizzy have really established themselves, they'll be able to take more chances and that Lynott's writing will become even more creative. In the meantime, *Fox* is an [**A: 1**] proposition.

Currently below Lizzy in terms of popularity but looking upward with ever-hopeful eyes are the Kursaal Flyers and Graham Parker And The Rumour, whose latest albums are, respectively, **Golden Mile** (CBS 81622, £3·39) and **Heat Treatment** (Vertigo 6360 137, £3·25). The Kursaals, previously with Jonathan King's U.K. label, have now signed with CBS and engaged the services of Womble-in-chief and Steeleye hat-maker Mike Batt in order to bring the Southend sound to an audience situated far beyond the bounds of Canvey and Benfleet. But, despite humorously employed banks of strings, massed choirs and other gimmickry, **Golden Mile** really doesn't gell. So, though I enjoyed the Kursaals' **Two left feet,** an immaculately fashioned Drifters pastiche and one or two other Birch / Collins / Shuttleworth / Bull / Douglas compositions, it's still a day-trip situation, a long stay being out of the question [**A: 2/3**]. The Rumour, on the other hand, must be one of the most potent bands to come out of the pub circuit since the unfortunate demise of Brinsley Schwarz. Which is understandable when one considers that Schwarz himself is currently ensconced in one of The Rumour's guitar seats, while Nick Lowe, the Brinsley's main song-source, sometimes (only one track in this case) acts as the band's producer. And while Graham Parker may not be a world-beater of a vocalist, he's certainly gritty enough, the strength of his songwriting more than atoning for any of his other deficiences. But what is even more remarkable is the actual *feel* of the band. Somehow they communicate the fact that they're undeniably destined for *Top Of The Pops* (or maybe even their own *Grey Whistle Test Special*) in the not too distant future—and then it'll be all over. Just one hearing of the band's *That's What They All Say* and The Rumour are certs for the next honours list. And that's a fact! [**A: 1**].

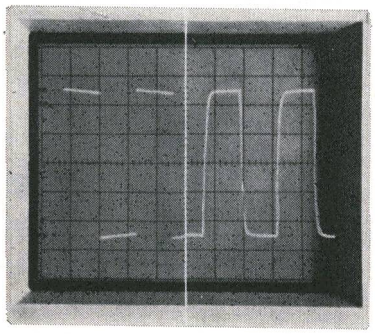
In Brief: The best of this month's oldies compilation is **Phil Spector's 20 Greatest Hits** (Phil Spector 2307 012, £3·25), which houses every one of those mono goodies by The Ronnettes, Crystals, Righteous Brothers and Ike and Tina etc. [**C: 1***], though **The Golden Age Of Sam Cooke** (RCA RS1054, £2·99), the finest Cooke album of them all and another 20-tracker, is equally indispensable [**C: 1***]. Bob Seger's **Night Moves** (Capitol EA-ST11557, £3·60) presents the Detroiter in typically aggressive solid-rock mood, though this time—for once—his material doesn't provide him with too much of a launching platform [**B: 2**], which is why I've spent more time listening to the excellent, though category-defying, **Norman Blake, Tut Taylor, Sam Bush, Butch Robins, Vassar Clements, David Holland and Jethro Burns** (Sonet SNTF704, £3·25), Blake being the fine guitarist who once graced Dylan's **Nashville Skyline**, Holland being the British bassist who went to the States to join Miles Davis and the rest being potential candidates for the Country Music Hall Of Fame [**A: 1***].



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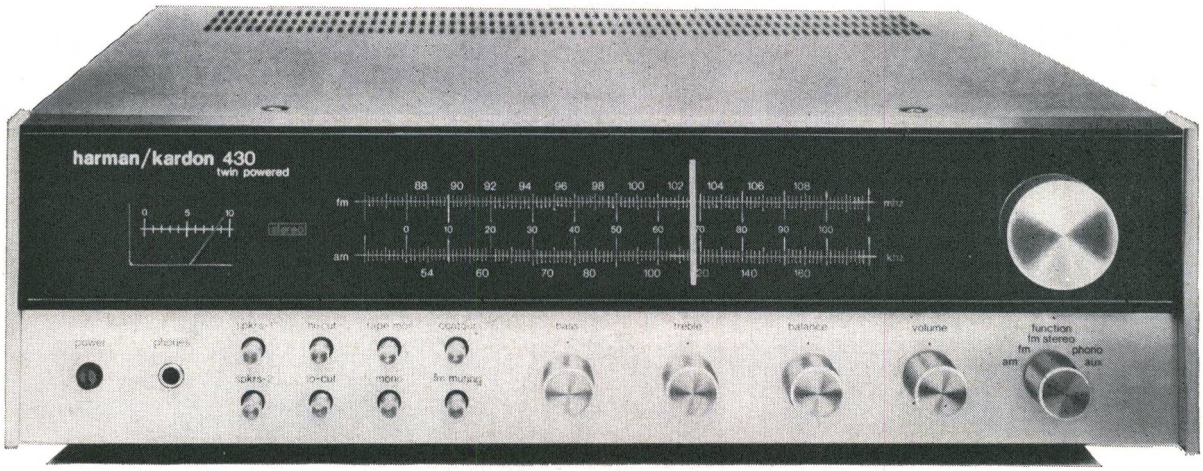
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folk



Paul Oliver

WHAT better way to play in the New Year than with the sound of the pipes? Topic have recently released several records of piping from both Scotland and Ireland. Before discussing them I should declare my Sassenach taste—a little piping goes a long way with me. I've never been one to swoon over the entry of the Scots Guards at the Aldershot Tattoo, the opening of the Edinburgh Festival, the Dagenham Girl Pipers, or even the rather more nubile girl's pipe bands of American street parades. I prefer the solo musicians, and they, fortunately, are more represented on record, currently.

John Burgess, who began playing the pipes (that is, as a practice chanter) at the age of four, is the subject of Volume One of **The Art of the Highland Bagpipe** (Topic 12TS291. He's now 42 years old and in his prime as a piper. The note goes further and calls him 'genius'. I'm not convinced about that, but his fingering is faultless, with the transition from slow air to jig made effortlessly on *Leaving Ardtornish* and *The Geese in the Bog*. Most affecting is *Salute on the Birth of Rory Mor* to the MacLeods in 1562, an example of *cool mor*, classical pibroch. More recent are the lively strathspeys and reels, which evolved from dance music to become demonstrations of the musician's ability, and the medley of hornpipes. For recording quality and performance these tracks rate **A: 1**, but I'm obliged to add that they seem to lack any colour of John Burgess' own personality.

The record makes interesting comparison with **Classics of Irish Piping** Volume One, featuring Leo Rowsome, who died in 1970 aged 67. The Medley of Irish Reels, opening with *Kiss the Maid Behind the Barrel*, is played with such spirit and infectious gaiety as to illumine the reasons for disappointment in the Burgess record. Of course, the uillean pipes have a harder, even somewhat screechier tone, which I personally prefer, but this does not detract from an old air like *Boolavogue* or *Savourneen Deelish*. Some of these items are very early, like *The Star of Munster* and *The Milliner's Daughter*, recorded full fifty years ago. They emerge from the grooves like bright shadows from the past. But the electric recordings of just a decade later are excellently re-processed and come over with astonishing brilliance. On Topic 12T259, it comes with really excellent notes by his friend Sean Reid. [**H: 1**].

Volume Two of the **Classics of Irish Piping** is devoted to Liam Walsh and William Andrews. I like Walsh's forceful attack as on *Dan McCarthy's Fancy*, which ends with *The Mountain Lark*, an item which Walsh played more than once on these tracks, all cut in the early 'twenties. Walsh had a penchant for trilling notes punctuated by short spurts, as on *Saddle the Pony*, which is staccato rather than syncopated. Side Two is devoted to William Andrews, of whom Reid says 'he was a good piper though perhaps not a great one.' His talents were favoured by better recording techniques but he seems to me to break time on *Yellow John* and *Kitty's Rambles*, the double jigs that open his set. He too plays *The Mountain Lark*, giving the collector an opportunity to compare styles and approaches. Andrews fluffs rather conspicuously on *The First House in Connaught* and in his choice of tempo on other items one finds oneself agreeing with Sean Reid. Topic 12T262. [**H: 2/3**]

I heard none of the foregoing musicians in person, but I did hear **The Last of the Travelling Pipers**, Felix Doran, eleven years ago at Keele. At that time he recorded a number of the items on Topic 12T288. He was a horse-dealer who travelled in a horse-drawn caravan and played at race meetings, country fairs and the like. Doran's approach to his music was as a true folk artist, with wild good humour alternating with passionate feeling and, on occasion, bouts of drunkenness. The quality of his interpretations comes over majestically on the air *The Dear Irish Boy*, which is rounded out in traditional fashion with a reel, *The Primrose Lass*. Other items range from the fine version of the reel *Rakish Paddy* to the beautiful air *The Coolin*, the recently popularised *Boys of the Lough*, or the old showcase *The Fox Hunt*. All these items are played with flair, feeling and yet control. It is a masterly set, demonstrating the quality possible when a virtuoso musician is also imbued with sensitivity for the music he plays. Sadly, Felix Doran died four years ago, in Manchester. [**A: 1**]

Fortunately Pat Mitchell is very much with us, a comparatively young disciple of Leo Rowsome, and subsequently, Willie Clancy. He has the hard-edged tone of the traditional musicians and plays with great accomplishment though, I suspect, at times a little shortness of wind. Like many faithful followers of the tradition who have listened hard to the older exponents, in whatever field one cares to name, there is a certain eclecticism in his work that reveals itself in the sources of his material. So *The Maiden that Jigged in Style*, which he obtained from Willie Clancy is coupled with an item obtained from a record by Tom Ennis, 'formerly a member of Police, Capt. Francis O'Neill's Chicago Music Club', for which however, he has no title. *The Concertina Reel* is what its name implies, transposed to the pipes, while some items come from cylinders made in the United States early in the century. This broad sweep of the tradition makes for greater variety of listening in a genre which can be rather repetitive. But some twenty tracks, some with two items on them, is packing in a lot with some loss in development, many of the pieces being quite short. On Topic 12TS294. [**A: 2**]

If you've actually listened to all the records mentioned here you're either a fanatically dedicated enthusiast of the pipes, or in need of a break. **Drops of Brandy** (Topic 12TS287) features Sean McAloon and John Rea and provides an extremely agreeable change of sound. McAloon plays the uillean pipes, in fact his concert-pitch set were made by Leo Rowsome, whom he admires above all others. But he also plays the fiddle, his first instrument after the whistle. His versatility is enhanced by the beautiful sound of John Rea's dulcimer playing. A nest of dulcimer players existed in Co. Antrim—some still do—but John Rea, a tugboat deckhand, is one of the few (if not the only one) on record. His instrument was made by his carpenter brother and has two octaves only, with the strings in threes. Played with wool-bound wire hammers it gives a bright sound whose clarity is a splendid counterpart to the pipes on *Trip to the Cottage* or *The Copperplate*. Rea plays solo on *The Basket of Shamrocks* or the reel *Coil the Hawser*, while Sean McAloon solos pipes on such a theme as *Paddy O'Brien's jig*, or his flat pipe version of the slip jig which gives the album its name. It is interesting to compare his pipe playing with his fiddle playing on *Crowley's No. 1* and *No. 2* Reels; the affinities become sharply apparent. But I like the themes where the two men play together best, and not least on *The Lark in the Morning*. Unreservedly recommended, especially for the initiate to Irish piping. [**A: 1**].

And Irish fiddle playing. Jimmy Power, on **Irish Fiddle Player**, has an album (Topic 12TS306) to himself; or at least, with minor accompaniment from Reg Hall on piano, who at times is scarcely audible, and the rather more audible tambourine of Gerry Wright on *Jackie Coleman's Reel*. Power has a sawing technique, rather unassuming and at first sounding a little pedestrian. After a while it grows on you, having the swing of the country dance or the pub performance rather than the recording studio. Though credited with a 'vast' memory for tunes, he draws from a fairly conventional repertoire on this record, including the ever-rising lark, and *Jug of Punch*. Jimmy Power has appeared on other Topic records and is undoubtedly popular, perhaps for the honest simplicity of his playing. But I must admit to finding it rather unexciting, and the occasional fluffs, as on *Jockey to the Fair*, are disconcerting. [**A: 2**]

This feature started with Scotland, and it's fitting to return there for the final items under review. An altogether different standard of fiddle playing is to be found on **J. Scott Skinner: The Strathspey King** (Topic 12T280). Skinner was born over 130 years ago in 1843, and he died in 1927. These recordings of his playing, which was well-known on both sides of the Atlantic, were issued on pre-electric 78 rpm discs. Given the circumstances, they are tolerably dubbed and do give us an opportunity to hear the immense skill of the dour old Deeside fiddler, who was persuaded with reluctance not to dedicate *The President* to Kaiser Wilhelm. His sparkling playing on Highland schottische, reels and hornpipes is beyond question, though the somewhat stagey performances and the persistent and dreary piano accompaniment does not appeal to me. In his case it seems, we are on the edge of the folk, for Skinner was a prolific composer, publishing in excess of 600 items in sheet music form. The dedications and tributes include items to his agent Gavin McMillan, the Laird of Drumblair, and Eugene Stratton 'the chocolate coloured coon.' Throughout, his playing is impeccable and while I cannot be totally enthusiastic about the approach I do feel this to be an important documentation. It comes with extensive notes including several photographs of the be-kilted and be-whiskered virtuoso himself. [**H: 1/2**]

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LIGHT



Peter Gammond

MAKING a timely appearance after Peter Clayton's survey of the Swing Era and his promise to continue some time in the future with the British scene, comes a most valuable set of records that will, no doubt, play a vital role in that future survey. **Those Dance Band Years** is a six-record set (available separately) covering the British 'Golden Age' from 1925 to 1939 (World Records ⓂSH361–SH366, £1·80 each). It must have been a labour of love (and what a labour) for our archivist benefactors at EMI, Chris Ellis who compiled and produced the set and John Wadley who has so adequately seen to the transference and re-mastering. Not to mention all others inspired or involved, and Brian Rust who supplies his usual erudite sleeve-notes. The British swing scene, without the benefit of a native source of jazz influence, naturally relied heavily on American importations to learn the tricks of the trade, the first boost being the visit of the Original Dixieland Jazz Band to England in 1919. Others, like Paul Whiteman in 1923, followed and, by 1925, when this anthology starts, the British musicians were well-versed in the art of jazz, sufficient to provide a very passable imitation of the best white bands in America. They certainly got a better grasp of the idiom than most of their European counterparts. In time, some of the bands even achieved a distinctive style of their own, particularly where a talented arranger was available—as in the case of Ray Noble for his own band and Sid Phillips for Ambrose. The best bands to come out of the melange were probably those of Lew Stone, Roy Fox and Ambrose—namely those with the greatest commitment to jazz; but we hardly need reminding of the achievements of bands led by Jack Hylton, Jack Payne, Jack Jackson, Carroll Gibbons, Harry Roy, Billy Ternent and Henry Hall, which wavered more between the hot and the commercial. We produced our own swing stars on every instrument and this collection shows what an incredible lot was happening. Obviously there were never enough top-class instrumentalists to give every band the sparkle of the Ambrose outfit and many of these tracks may pass you in such a wealth of rooty-Venuti playing and offbeat rhythms, but there is no doubt that anyone with a taste for the dance music of the 1920s and 30s will revel in the endless permutations of music-making and grow warmly nostalgic at the roll-call of half-remembered names that fill the gaps between the illustrious. This is a tremendous achievement and its compilers deserve a knighthood for services to British music. The ancient sounds have been admirably revived [**H: 1**].

An interesting appendage to this great collection is an album called **Swing in Europe 1936–1942** (Telefunken ⓉDP6.28312, £3·75), a Selecta import, which will lead you to less familiar names like Teddy Stauffer, Fud Candrix and Heinz Wehner. By this time the European bands, many of them in the face of dictatorial condemnation, had become as fluent in the swing idiom as the British, and there are some fine tracks in this interesting double album [**H: 1**].

An album called **Among Your Souvenirs** (Decca SPA-R465, £1·89) is based on the BBC Radio 2 series of the same name featuring Forbes Robinson, Valerie Monese and Reginald Leopold and his Orchestra. It includes songs like 'Glorious Devon', 'Friend o' mine', 'Stonecracker John' and 'Down the vale' with *Bal masque* and *In the shadows* as orchestral interludes. A promising programme with excellent singing from Forbes Robinson, some slightly less secure moments from Valerie Monese. But what a peculiar recording. It sounds as if it was done on a cheap tape recorder and consequently makes the orchestra sound below average; the voices emerge reasonably well [**C/D: 1**].

It is good to have the original recordings of **Beyond the Fringe** back in the catalogue (One Up ⓂOUM2151, £1·99) for this is now an historical show that was to set the trend for many years to come, while its stars Alan Bennett, Peter Cook, Jonathan Miller and Dudley Moore still shine brightly. Supervisor George Martin caught the crisp atmosphere of the show in the Fortune Theatre and it all brings back many hilarious memories [**H: 1***].

JAZZ



Ken Hyder

HAPPY New Year—and this year may turn out to be Charlie Parker year, for March is the anniversary of Parker's birth or death or something like that. Anyway it looks like all the record companies with Bird cuts in their vaults will be commemorating the occasion by re-releasing what they've got. Some of it will be choice, precious gem material, and I suspect that other albums will be collections of less successful takes, while others still may contain just a small number of Parker cuts wedged between other bebop tracks from the same period. So check it out before you buy. One double album you'll not go wrong with is **Bird/The Savoy Recordings (Master Takes)** Ⓜ on Savoy SJL2201 [**H: 1***]. The music is consistently rated excellent-plus throughout the thirty individual tracks (there are no alternate takes in this set) running from Bird's injection of inspiration into 1944 Tiny Grimes dates to 1948 quintet cuts with Miles Davis, John Lewis, Curly Russell and Max Roach. Parker's genius is striking. Here he is not only playing beautifully but setting up and defining a group and individual style of playing which hasn't been equalled since. The 'essential for your collection' tag is often overplayed, but believe me this is precious stuff. If you buy just one record this year—make it this one. Incidentally the remastering of these historic cuts is remarkable. Another double album **Charlie Parker, Miles Davis, Dizzy Gillespie** on Vogue VJD529 Ⓜ [**H: 1/1***] has Bird on over half of its tracks. Some of the cuts are live and the recordings and the music are often rougher. However, on some of these rougher live tracks, the players take more chances and the result is often electrifying. Listening to these concert dates it's easy to imagine what it must have been like to have been there when bebop was being forged. There are a few Dizzy tracks from a 1953 Paris gig which generate pure knife-edge excitement. On some of these cuts there is some absolutely amazing scat singing from Joe Carroll. Of course it's the Parker tracks which steal the show and if you're short on Parker records, why don't you aquire this set as well as the Savoy recordings?

It used to be pretty hip, if you were a jazz freak, to dig James Brown as well. Nowadays it's perhaps groovier—if you're into that sort of thing—to extend your listening to reggae and Stevie Wonder. So when a new James Brown album comes out it comes on like a blast from the past. Neither he nor his band has changed very much in style over the past few years. I don't suppose anybody needs more than a couple of James Brown albums, but don't let that detract from his value. It may be formula music—but what a formula! I don't think anyone else has quite captured Brown's jigsaw approach to soul music. He gives each musician a role to play, usually a tiny fragment of the rhythm. Thus no one member or section plays the whole line. The result is a very complex rhythmic structure which sounds so neat, natural and logical. All this is a kind of prelude to saying that Mr. Brown has a new offering in the shops. If you've got some Brown albums already, you probably won't need this one. But if you don't have any works of the 'minister of new super heavy funk' as he now styles himself, **Get Up Offa That Thing** Polydor 2391 228 [**A: 1/2**] is as good as any to start with.

Ivor Cutler isn't any more of a jazz performer than, say, Lord Buckley or Lennie Bruce, but like Buckley and Bruce his kinky off-beat humour is likely to appeal to jazz fans. And for that reason I feel it my duty to draw your attention to his **Jammy Smears** on Virgin V2065 [**A: 1/2**]. I wouldn't presume to analyse Ivor's humour, but if I string words like . . . naive . . . incongruous . . . incisive . . . bizarre . . . Scottish/Jewish, I might intrigue you enough to check it out.

Barre Phillips' **Mountainscapes**, ECM 1076 [**A*: 1/2**] is a polished disc. The playing, particularly the leader's own bass playing is immaculate, and the recording is fantastic even by ECM's own standards. There's the added bonus of some of the most tasteful synthesiser I've heard—and I tend to hate that instrument. A very sensitive album—essential for bass players. Jack de Johnette's **Untitled**, ECM 1074 [**A: 2/3**] is a bit lacking in direction, or rather it seems to be going in too many directions at once. There are some tight bouncy moments, however.

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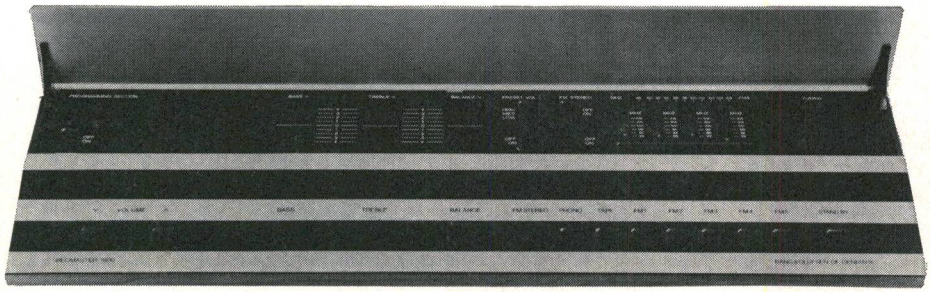
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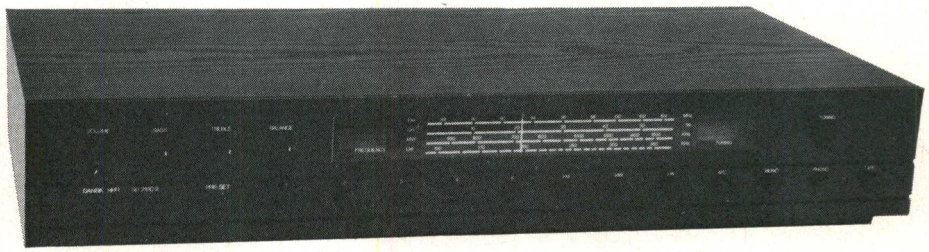
SANSUI 331





B&O BEOMASTER 1900

DANSK 2100



THREE RECEIVERS - A COMPARATIVE REVIEW

Gordon J. King

IN continuation of our group reviews, we look this month at three receivers of medium power located towards the middle of the price spectrum. Two are of Scandinavian origin and the third Japanese—namely, the *Dansk 2100*, the B & O *Beomaster 1900* and the *Sansui 331*.

Comparing like with like (that is, the power yield to clipping threshold into 8-ohm resistive loads over 20 Hz–20 kHz with both channels driven simultaneously), the most powerful of the group is the Beomaster 1900 at almost 25+25 W. With about 1·5 dB less power the Dansk 2100 comes next at 18+18 W. The Sansui 331 is the least powerful under these conditions being about 3 dB down from the Beomaster at almost 13+13 W (but 10+10 W at 20 Hz). However, under realistic loudspeaker driving conditions the power differences are less significant, as can be judged from the intermodulation distortion spectrograms in fig. 6.

The R_L load (defined above results table) was employed for these measurements and the parameter is the rms voltage of either signal across the load referred to −40 dB (1%) maximum amplitude of any IM product. As revealed by the test results, the Dansk produced the greatest voltage in spite of having less 'heating power' than the Beomaster while, as would be expected, the Sansui produced the least voltage, but still not all that much below the voltage of the Beomaster.

At slightly reduced drives all receivers gave significantly reduced IM products, but this method of testing once again exposes the folly of assessing the sound pressure producing capabilities of amplifiers in terms of average power consumed by resistive loads. There is often very little correlation between the two.

It will be appreciated that the Z_L load used is engineered for a fairly large phase angle corresponding to a moderate modulus of impedance (i.e., 62° and 5·7 ohms) at the test frequencies. While few loudspeakers are likely to represent such a cruel load, the test has comparative merit, revealing in the main how the protection circuits behave on fairly heavy out-of-phase load current.

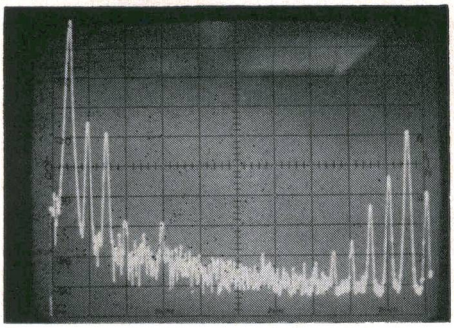
In other words, in spite of the differences in the average powers of the receivers, there are unlikely to be corresponding differences in sound pressure level to clipping threshold with the receivers driving a given pair of loudspeakers because the *sensitivity* of a loudspeaker refers to the *voltage* across it required to produce a given *sound pressure* level.

None of the receivers exhibited increasing distortion with reducing output voltage, and with 500 mV only of each signal across Z_L the maximum amplitude IM product was typically no greater than −60 dB (0·1%). Distortion at the upper-middle of the dynamic range was assessed in terms of *distortion factor* at 10+10 W across R_L at frequencies of 20 Hz, 1 kHz and 20 kHz. The test signal was applied to a high-level input at an amplitude 20 dB above the established sensitivity and the 10+10 W output was obtained by suitably retarding the volume control.

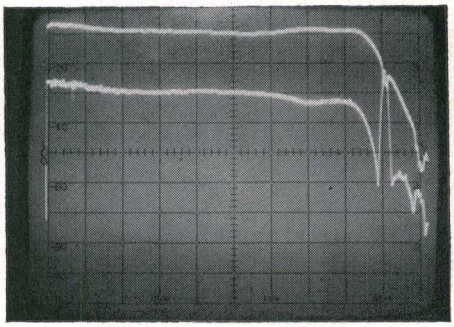
The Beomaster came out best overall on this test, but the least distortion at 1 kHz was produced by the Sansui. Both the Dansk and the Sansui had comparatively high levels of 20 kHz distortion factor, the Beomaster being best at a mere 0·1%. The test results show that the low-frequency power of the Sansui was limited to 40 Hz; at 20 Hz this receiver was *just* clipping the signal at 10+10 W (i.e., at 8·94+8·94 V across 8-ohm loads).

The Sansui had by far the best magnetic pickup overload characteristic, corresponding approximately to 38 dB. The Dansk was poor at around 22 dB and the Beomaster not much

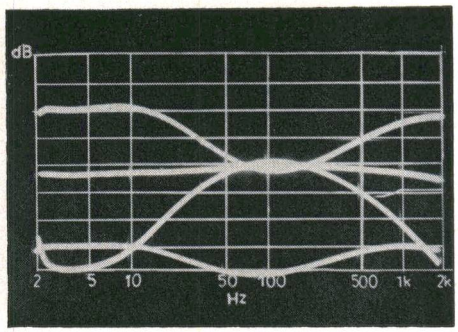
DANSK 2100



1a

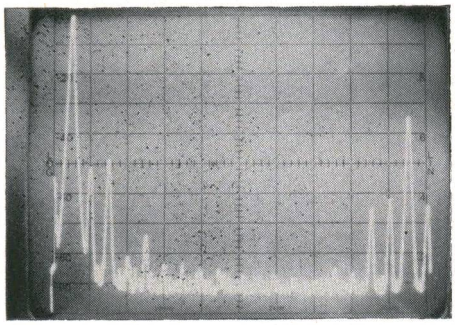


2a

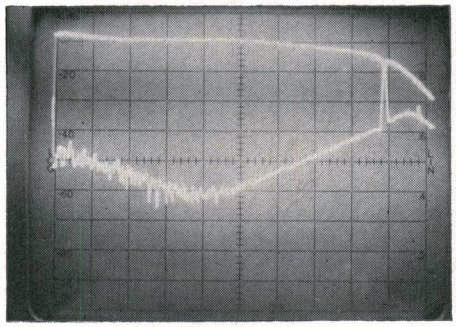


3a

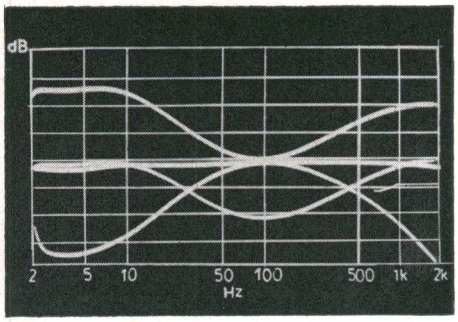
SANSUI 331



1b

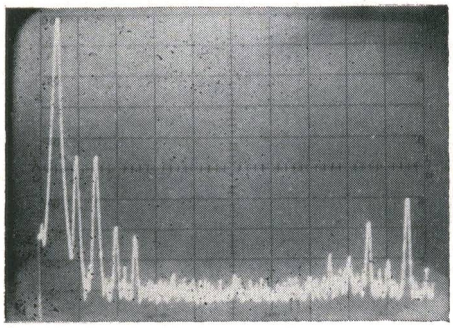


2b

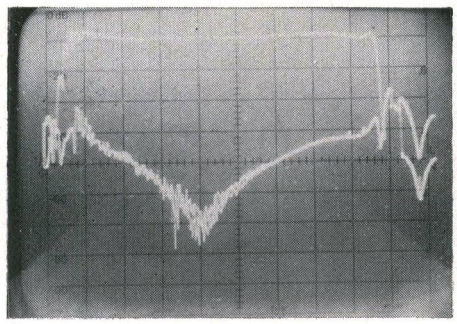


3b

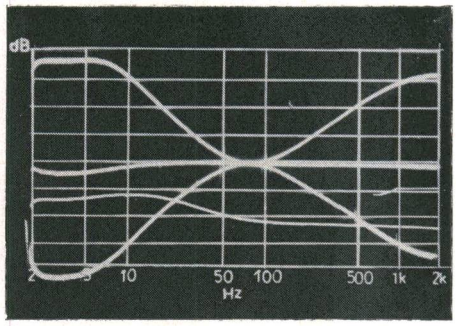
B & O BEOMASTER 1900



1c



2c



3c

Fig 1 *Stereo distortion 100% modulation at 1 kHz, 7·6 W output, also showing pilot tone rejection ratio and resulting IM products.*

Fig 2 *FM stereo frequency response (top) and stereo separation below, showing pilot tone rejector notch (where applicable). Scale 10 dB/div. and 3 divisions per frequency decade (logarithmic sweep 20 Hz–43 kHz).*

Fig 3 *Tone control and loudness at −30 dB responses. Scale Hz×10 and 5 dB/div.*

Fig 4 *Departure from RIAA at 1 dB/div (top). Stereo separation (PU) at 10 dB/div. from top response. Sweep Hz×10 (20 Hz–20 kHz).*

Fig 5 *Rise-time (R_L) top and settling-time (1 μF//R_L) bottom. Sweep 10 μsec./div.*

Fig 6 *IM distortion from driving signals at f1 = 15 kHz and f2 = 16 kHz into Z_L. Parameter is amplitude of either driving signal ref. 1% max. IM product (see results table). Scale 10 dB/5 kHz/div.*

(a) Dansk 2100

(b) Sansui 331

(c) B & O Beomaster 1900

better at 24 dB. On the other hand, the best pickup S/N ratio (CCIR weighted) was given by the Beomaster, but possibly because this had the lowest pickup input sensitivity of the group.

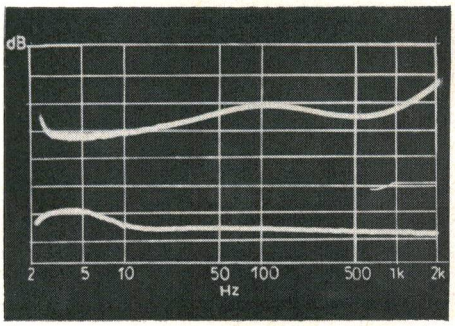
None of the receivers had an unnecessarily extended upper-frequency roll-off point. The Beomaster had the widest response and hence the smallest rise-time; the Dansk the most limited response and hence the largest rise-time. At around 50 kHz and 7 μsec rise-time the Sansui was the nearest approach to my ideal, but even this was a trifle too fast. 35 kHz and 10 μsec would, I feel, be better. The rise-times and settling-times are depicted by fig. 5 oscillograms.

It is noteworthy that more overshoot across R_L//1 μF is produced by those receivers of the smallest rise-time across R_L. We have brought this out before, but this is the first opportunity we have had to show the effect comparatively.

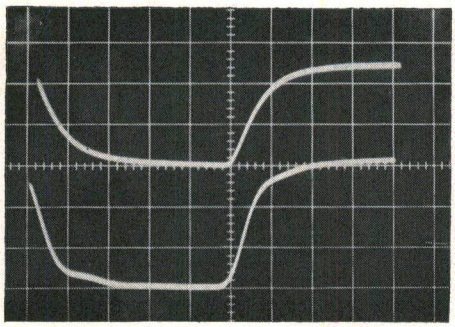
The output transistors of the Dansk were less fast than those of the other two receivers, which is probably one reason why the designer decided to curtail the upper-frequency small-signal frequency response. The low-frequency damping factor of the Sansui was rather poor at 11 (ref. 8 ohms). The Beomaster was the highest at 66 and the Dansk perfectly acceptable at 35. The relatively low damping of the Sansui is probably associated with the low-frequency power limitation.

Tone control and loudness responses, the latter at −30 dB setting of the volume control, are given by the fig. 3 sweep oscillograms, and one point which should be noted here is that the loudness of the Dansk cannot be switched off. Thus the volume control of this receiver always depresses the middle of the spectrum more than the bass and treble ends as the control is turned down, which is a pity.

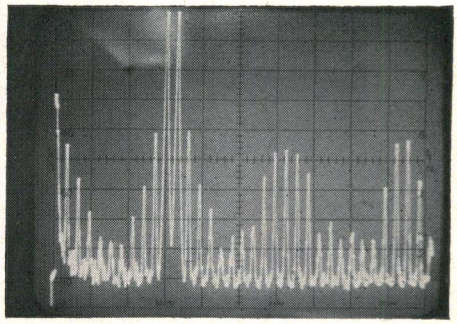
With the other two receivers the loudness effect can be defeated if required so that the volume control then works without introducing frequency response anomalies. It should also be noted that the Beomaster loudness switch effectively boosts the bass end only of the response—not the treble end as the



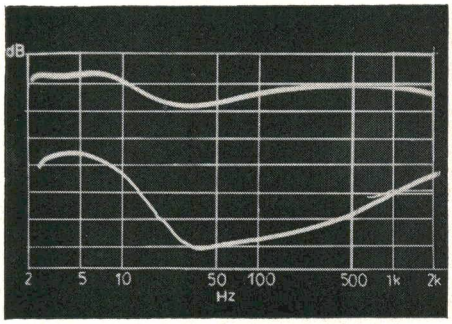
4a



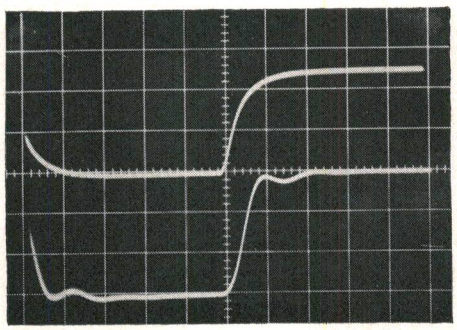
5a



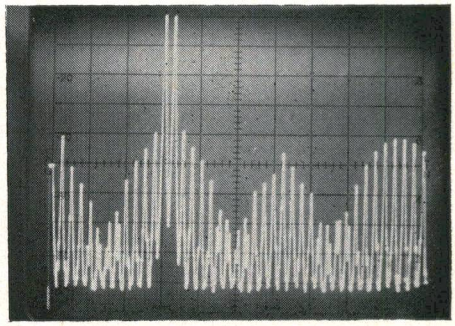
6a



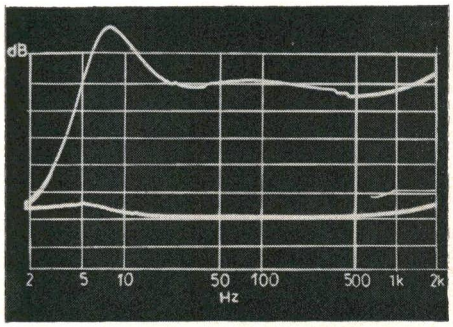
4b



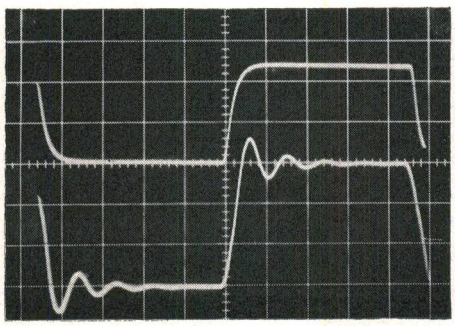
5b



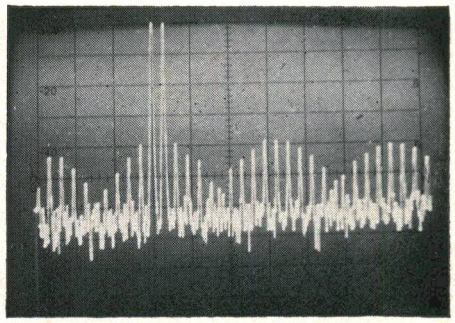
6b



4c



5c



6c

Sansui—but this is no particular hardship since hi-fi users will operate the receiver with the loudness switched off, anyway! The Dansk and Sansui have similar tone control characteristics, while the controls of the Beomaster allow for greater bass and treble lift.

The sweep oscillograms in fig. 4 show the departure from RIAA at *1 dB/div.* (top) and stereo separation at *10 dB/div.* (bottom). The average response deviation is within ±1 dB, which is tolerable, while the stereo separation is also adequate. The somewhat greater low-frequency deviation of the Beomaster is related to an inbuilt high-pass filter which appears to be responsible for a small amount of overshoot. More critical damping of this filter would thus seem to be warranted.

While the Beomaster tunes only the vhf FM Band II over 87·5–108 MHz, the Dansk and Sansui are equipped also with AM bands. The Sansui tunes the MW band, while the Dansk has MW *and* LW bands. For the best results an external AM aerial is required with the Dansk. The Sansui also has terminals for an external AM aerial and earth, but will usually respond to the 'local' MW stations from an internal ferrite rod aerial provided the receiver can be turned for the best S/N and S/interference ratios—which is not always feasible when the receiver is linked to ancilliary equipment and positioned tightly on the 'hi-fi shelf'.

All the receivers, of course, require an FM aerial to suit the prevailing signal conditions and reception requirements. The Dansk has an input only for 240–300 ohms balanced twin feeder, while the Sansui and Beomaster have inputs for both balanced twin and 75 ohms coaxial feeder. Hence all tests on the Dansk were performed *via* a low-loss balun transformer feeding from a 75-ohm unbalanced signal source.

The receiver with the best FM sensitivity and the highest ultimate stereo S/N ratio (CCIR-weighted) was the Beomaster. Full details for the technically minded are given in the test results table. The Dansk fared less well in these respects than the other two receivers, but the requirement of a balun transformer for aerial matching must obviously figure in the equation.

Nevertheless, in spite of the lowest least usable IHF sensitivity the Dansk was capable of satisfactory operation on local as well as some fringe stereo stations. The background noise, however, was marginally higher on this receiver than on the Sansui or Beomaster when responding to relatively weak stereo signals. All receivers arrived at −1 dB limiting on low-level aerial signal, but here again the Beomaster came out best.

Most of the other FM parameters, too, were better on the Beomaster than the other two models, but some of these would be of only marginal value to the user in a 'normal' reception area interested mainly in receiving signals from service area transmitters. For more difficult locations, however, the greater and less asymmetrical overall selectivity of the Beomaster might be useful. The AM rejection ratio of the Beomaster at 60 dB is a very good value, which is also reflected as a desirably small capture ratio. This receiver

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also has the best front-end selectivity of the group. Nevertheless, the method and ease of tuning should be taken into account when considering the suitability of any receiver for DXing (long-distance reception)—see later.

A number of measurements were made to assess the audio performance of the FM section of each receiver, and three aspects of this are revealed in the fig. 2 series of sweep oscillograms. The sweep is from 20 Hz to 43 kHz and the upper curve is that of stereo frequency response ref. 50 μsec pre-emphasis (modulation depth approaching 100% at 15 kHz). In theory the response should be 'flat' from about 30 Hz to 15 kHz and thereafter falling swiftly into a 19 kHz pilot tone notch. This requirement was almost fully met by the Beomaster. The inbuilt high-pass filter is again exposed on this sweep (*i.e.*, the fast roll-off at the low-frequency end). There is a mild rise in response just before the 19 kHz notch, which takes the response down to about −35 dB, which is good.

While the other two receivers exhibit an extended low-frequency response, neither is very good with respect to pilot tone rejection; in fact, the Sansui is singularly poor in this respect, the response being only about 15 dB down at 43 kHz! The Sansui designers should take steps to improve this parameter. The Dansk is better, but even on this model the effective rejection at 19 kHz is not much more than 12 dB, which is poor.

The lower curve of each sweep defines the stereo separation. At nominally 20 dB, the Dansk is poor. The other two are satisfactory, with the mid-spectrum separation approaching 50 dB and the upper-frequency separation not being less than 20 dB (30 dB on the Beomaster).

Further appraisal is given by the fig. 1 series of spectrograms. The driving signal is 1 kHz providing 100% stereo modulation (*i.e.*, 90% signal and 10% pilot tone plus small subcarrier residual). The spectrograms thus provide a total harmonic distortion analysis up to 20 kHz (2 kHz/div.) and also (very important) show the amplitude of the pilot tone emanating from the loudspeaker.

The Beomaster with its excellent pilot tone rejection ratio keeps the pilot tone to 60 dB below the driving signal, which is excellent, while the Sansui with its poor rejection shows the pilot tone a mere 35 dB below the driving signal. The Dansk is a little better at −39 dB.

When there is a large amplitude pilot tone, intermodulation products are generated due to the interaction of the tone and the audio signal. These are the components at the right-hand side of the spectrograms. It has been proved recently by objective/subjective tests that receivers exhibiting multiple IM products owing to scanty pilot tone rejection are less likely to audition as favourably as counterparts with larger rejection and hence fewer and lower amplitude IM products. Thus both Dansk and Sansui should endeavour to enhance this area of their designs.

So far as harmonic distortion alone is concerned, the Sansui came out top with the Beomaster a close second. The Dansk exhibited second harmonic distortion of −35 dB (almost 1·8%), which is not too good. Distortion in various other modes (i.e., mono, stereo L+R and L−R) is also analysed in the test results.

All three receivers were operated for several weeks in the listening room on FM radio, disc and tape sources with various loudspeakers. All were capable of producing 96 dBA of sound pressure on music peaks in a room of some 62 m³ containing 'average' furnishings and driving loudspeakers of moderate efficiency. Notoriously inefficient loudspeakers, however, tended to push the receivers to the point of clipping when driven hard.

The advantage of the good FM sensitivity and stereo S/N ratio of the Beomaster was detected on weak stereo signals from distant stations, but the background noise level was not obtrusive with the other two models when responding normally to 'service area' transmitters.

For ease of manual FM tuning the Sansui was favoured. This adopts the conventional, flywheel assisted tuning mechanism and clearly printed and illuminated scales. The scale length of the Dansk is about an inch shorter than that of the Sansui and the tuning mechanism is less free. While the Sansui employs a mechanical capacitor gang, the Beomaster and Dansk use varicap tuning which lends itself to press-button station selection. Thus the Dansk has five buttons for station selection in addition to a button which brings in FM manual and buttons for selecting the MW and LW bands. The pretuning controls for the FM buttons are located beneath a rather primitive sliding

Test conditions. 240 V 50 Hz mains input. FM aerial input corresponds to pd across matched 75 ohms. All S/N and disturbance ratios measured with CCIR weighting. For FM measurements volume control set on 100% modulation for 7·6 W into R_L. Loads employed: $R_L = 8$ ohms resistance, $Z_L = 5{\cdot}7$ ohms and 62° phase angle at 15 kHz and R_L//1 μF for transient tests.

Notes: (1) Worst over band. (2) Ref 10 μV input. (3) 1 mV input and 100% FM and 30% AM. (4) Both sweeps ref. 50 μsec pre-emphasis (100% modulation occurring at 15 kHz). Also showing 19 kHz pilot tone rejection. (5) Also showing 19 kHz pilot tone residual. (6) Rise-time measured across R_L and settling-time across R_L in parallel with 1 μF. (7) Ref. the power measured.

MEASURED PARAMETER	DANSK 2100	SANSUI 331	BANG & OLUFSEN BEOMASTER 1900
FM SECTION			
Least usable IHF sensitivity[1]	4 μV	2·5 μV	1·5 μV
Limiting −1 dB	6 μV	2·75 μV	1·5 μV
50 dB S/N ratio	15 μV(m); 150 μV(s)	6 μV(m); 85 μV(s)	5 μV(m); 55 μV(s)
Ultimate S/N ratio	57 dB(m)/150 μV; 54 dB(s)/500 μV	70 dB(m)/200 μV; 56 dB(s)/600 μV	67 dB(m)/75 μV; 65·5 dB(s)/750 μV
Front-end 3rd order intermodulation	63 dB	60 dB	66 dB
Capture ratio IHF	<3 dB	2 dB	<2 dB
Repeat spot suppression	82 dB	72 dB	85 dB
Front-end selectivity ('figure of merit')	32 dB	30 dB	56 dB
Overall selectivity IHF[2]	+400 kHz 39 dB; −400 kHz 66 dB +200 kHz −60 dB; −200 kHz 12 dB	+400 kHz 46 dB; −400 kHz 60 dB +200 kHz 2dB; −200 kHz 6dB	+400 kHz 62 dB; −400 kHz 62 dB +200 kHz 0dB; −200 kHz 10 dB
AM rejection ratio[3]	58 dB	50 dB	60 dB
Stereo frequency response/separation[4]	Fig. 2(a)	Fig. 2(b)	Fig. 2(c)
Stereo distortion 100% modulation[5] **(R_L)**	Fig. 1(a)	Fig. 1(b)	Fig. 1(c)
Mono distortion 1000% modulation (R_L)	1·78% 2nd; 1% 3rd	0·25% 2nd and 3rd	0·12% 2nd; 0·3% 3rd
Stereo distortion L+R channel (R_L)	2·5% 2nd; 1·25% 3rd; 0·7% 4th	0·22% 2nd; 0·2% 3rd	0·3% 2nd; 0·2% 3rd
Ditto L-R channel (R_L)	0·8% 2nd; 1·78% 3rd	0·08% 2nd; 0·2% 3rd	0·18% 2nd; 0·56% 3rd
Stereo switching level (muting level)	5·5 μV (no muting)	7·5 μV (no muting)	1·5 μV (no muting)
AMPLIFIER SECTION			
Power over 20 Hz–20 kHz to clipping (R_L)	18+18 W	12·5+12·5 W (limited at 40 Hz)	24·5+24·5 W
Damping factor 40 Hz and 2 W (R_L)	35	11	66
Frequency response (−3 dB)	13 Hz–22·6 kHz	16 Hz–49 kHz	16 Hz–67·4 kHz
Rise-time/settling-time[6]	Fig. 5(a)	Fig. 5(b)	Fig. 5(c)
Slewing-rate (R_L)	2·9 V/μsec	3·8 V/μsec	3·6 V/μsec
Inputs (sensit./Z/(S/N))[7]			
low-level (PU)	2·2 mV/47 k/69 dB	2 mV/50 k/67 dB	3·2 mV/47 k/72 dB
high-level	200 mV/470 k/84 dB	110 mV/50 k/82 dB	240 mV/470 k/78 dB
PU overload threshold at 1 kHz (rmsV)	26 mV	154 mV	50 mV
Tape recording output	per DIN	150 mV (nominal); (30 mV DIN)	100 mV/100 k nominal (DIN)
Dist. factor 10+10 W R_L (20 Hz/1 kHz/20 kHz)	0·18%/0·08%/0·6%	clipping threshold/0·065%/0·5%	0·28%/0·14%/0·1%
Intermodulation distortion (Z_L)	Fig. 6(a). 7 V each signal	Fig. 6(b). 5·8 V each signal	Fig. 6(c). 6 V each signal
Approx. price (excluding VAT)	£165·00	£120·00	£210·00

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cover at the left-hand side of the fascia.

The Sansui has no press-button station selection and an ordinary rotary switch selects FM or AM. The Beomaster is in a class of its own in these respects. As already noted, it has no AM bands. For FM, though, it has five 'touch sensors', four for pre-tuned programme selection and the fifth bringing in the manual tuning.

At this juncture the styling of the Beomaster must be compared with that of the Dansk and Sansui. It will be seen from the photographs that the Sansui represents a fairly typical receiver of Japanese origin, including a dark-backed tuning scale, 'brushed aluminium' fascia, well made wooden enclosure and RCA 'phono' type sockets for signal sources with DIN socket duplication for connecting a tape machine. It is a handsome receiver, accurately finished and solid to the feel, with terminals for loudspeakers and aerials. The Dansk reflects more the Continental look, being shrouded in total black, with black knobs and buttons and DIN sockets all round. The Beomaster is also designed round the German DIN scheme of things and hence employs sockets of this kind, but it is entirely different from the other two models.

It is of a wafer-like construction—thin and long and not too wide. A sleek, 'brushed aluminium' top plate, which closes slowly by itself when started, normally covers the primary controls at the top of the receiver. The rear of the receiver is louvred black metal and this for mspart of the heat-sink area. After preconditioning, the temperature of the accessible parts of the heat-sink metal work was little more than 20°C above ambience which is acceptable. The main controls and switches beneath the top cover include bass, treble and balance sliders, preset volume control switch having high, medium and low positions, FM stereo and loudness on/off switches, main tuning scale and sunken control knob whose surface is flush with the top of the fascia, four small scales and controls for presetting the stations, and the mains on/off switch.

The DIN sockets for connecting disc and tape programme sources and loudspeakers are placed underneath the receiver at an angle convenient for plug insertion.

After switching on, pretuning the stations and setting the main controls as required, the top cover can be closed and the receiver operated by its 'touch sensors'. At the front of the top panel are two strips of dark-coloured material separated by 'brushed aluminium' upon which are printed the various 'touch sensor' functions and bass, treble, balance, volume up/down and FM stereo indications. The upper dark strip passes light from the illuminated indicators below, while the lower strip has rectangular indentations moulded into it. These are the 'touch sensors' which correspond to the functions printed on the adjacent aluminium strip.

They are totally electronic in operation and work by an imbalance of capacitance in an otherwise capacitively balanced transistor control circuit when a finger is brought into contact with an indentation. The control works in conjunction with an oscillator. Under normal conditions the oscillatory circuit is balanced, but when a finger makes contact with a sensor indentation the oscillatory balance is destroyed and the transistor switches on. This in turn triggers an IC matrix which then selects that particular function while simultaneously lighting the appropriate indicator just above the indentation.

There are seven such selector 'sensors' for the four preset FM programmes, for bringing in the manual tuning and for phono and tape sources. Two more sensors give a control of volume, one taking the gain up in steps and the other taking the gain down in steps over a range of zero to the maximum as established by the design and power of the amplifier. Decreasing or increasing gain which occurs as long as a finger is held in contact with the appropriate indentation is indicated by an arrow head of red light of shifting intensity. There are two arrow heads pointing towards each other, so the intensity shifts from left to right as the volume is going up and from right to left as it is going down.

The sensor functions here are the same as described, but the control is more complicated. It works in conjunction with a binary counter which has fifteen steps. The step at which the count commences is established by the setting of the preset volume control switch beneath the top cover. This, of course, sets the volume level which will occur when the receiver is first switched on and before the volume sensors have been touched. The counting progressively increases the intensity of a small lamp around which are grouped four photosensitive resistors. Thus, as the brightness increases the resistance of the photosensitive resistors falls, and these are arranged in a potential divider circuit so that when the lamp is fully illuminated the condition of minimum gain obtains. The converse, of course, happens when the sensor for 'volume up' is touched, the count then causing the lamp intensity to fall in the binary steps.

Another sensor puts the receiver into a standby condition by activating a relay. This condition occurs automatically each time the receiver is switched on, and it is indicated by the glowing of a small red light at the right-hand side of the indicator strip. To programme the receiver subsequently it is only necessary to touch the required source sensor and then to set the volume as required. A field-effect transistor muting circuit is built into the design so that clicks and plops are avoided when source changing or programme selecting.

As already noted, it is necessary to raise the cover to adjust the tone and balance controls, but the settings of these are revealed by illuminated scales on the indicator strip, as also are FM stereo mode and optimum tuning, the latter shown by two adjacent wedged-shaped areas of illumination, the optimum tuning point obtaining when the light intensities of the two areas are equal.

The receiver worked extremely well in practice, but one or two points which could possibly be improved were noted. It would have been better if the mains on/off switch was accessible on the front edge of the receiver, perhaps alongside the remote loudspeaker switch, to avoid having to raise the top cover each time for switching on or off; a greater number of binary steps for the volume control action, particularly at the higher gain levels, would be desirable (it is understood that a suitable IC for this is being sought); greater clearance beneath the receiver for the DIN-plug-terminated cables would also be an advantage; and for full exploitation of the excellent FM parameters a less cramped main tuning scale would not be amiss (the effective length of the scale fitted is about 3 in. which makes it difficult to locate and identify the many stations that the receiver is capable of receiving). In general, however, the four primary stations would be pretuned and selected by the 'sensors'.

In view of the mode of volume control, muting fet, etc. attention was directed to the distortion aspects of the receiver with relatively high levels of source signals. The distortion remained acceptably low with signal levels of at least 20 dB above the rated sensitivities, though there was marginally more third harmonic than possibly generated by receivers using conventional controls. A greater overload margin for magnetic pickup might be an advantage, but with the margin already provided it is unlikely that an overload condition would occur from a typical magnetic cartridge.

There is no doubt that the *1900* is a very interesting receiver, and for the electronics it embodies it is reasonably priced. The avoidance of potentiometers and switches of the mechanical variety eliminates one possible source of long-term aberration (electronics are generally considered to be more reliable than mechanics in the long-term). The electronic control also lends itself to remote control, which is probably the next ace that B & O have up their sleeves!

A final thought: if you have a cat or kitten roaming the house don't be surprised if you get a sudden change of programme or if the receiver goes into standby. It requires only the smallest change in 'sensor' capacitance to precipitate a switching action!

There we have the three of this month's group. If you want an unusual and exciting receiver the Beomaster will probably be your choice. If you are more conventionally-minded the Sansui takes some beating at the price. It is a good receiver and works well. The Dansk is similar and has the advantage of a LW band; but there are some aspects of it which are outweighed by the other two models; it is also physically larger than the Sansui and appears to lack the mechanical robustness of similarly-priced Oriental creations. Nevertheless, it performed in the listening room without default and may be liked by some for its all-black presentation. It can seemingly sometimes be obtained for less than the recommended retail price from various sources, including some photographic stores.●

Manufacturers:

DANSK. Distributed by Plustronics Ltd., Hempstalls Lane, Newcastle, Staffs. ST5 0SW

SANSUI. Distributed by Vernitron Ltd., Thornhill, Southampton SO9 5QF

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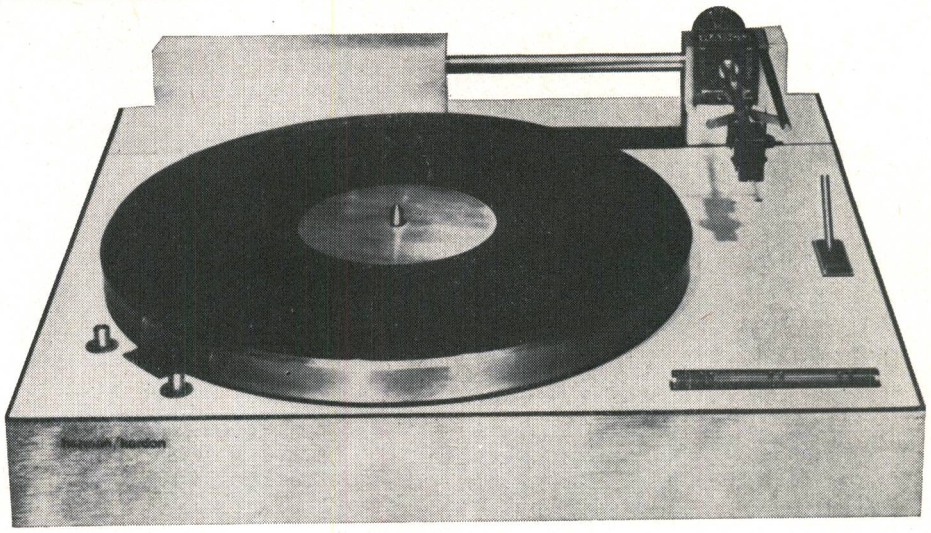
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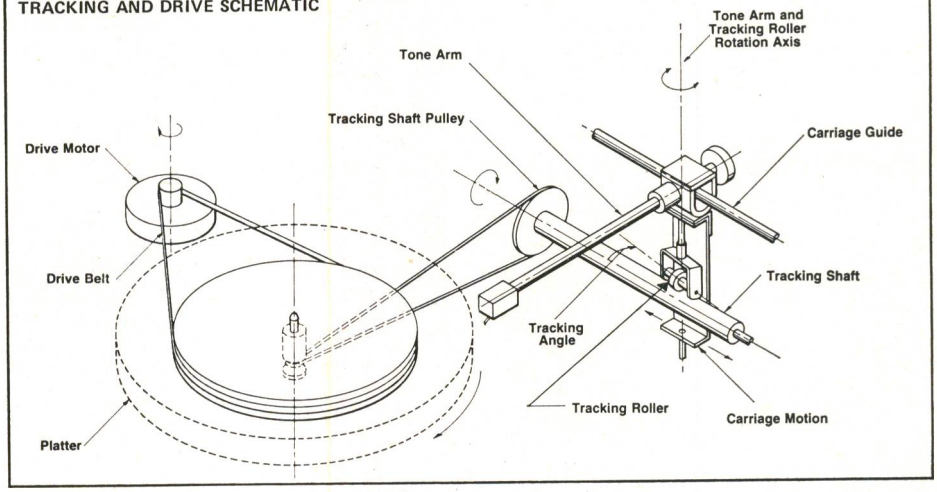
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Donald Aldous & Gordon J. King

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Two speed (33⅓ and 45 rpm, adjustable ±5·5%). Brushless DC motor with precision-ground belt. **Tracking error, skating force, vertical friction, lateral friction:** all 0. **Rumble:** −68 dB (DIN B). **Wow and flutter:** 0·04% (NAB weighted) and 0·09% (DIN B). **Hum:** −76 dB. **Speed constancy:** ±0·3%. Viscous damped cueing control. **Tonearm mass:** 6 grams. **Price:** £361 inc. VAT. **Manufactured by Harman Kardon, Plainview, New York 11803. Distributed in UK by Tannoy Products Ltd., St John's Road, Tylers Green, High Wycombe, Bucks. HP10 8HR.**

FITTINGLY, in this centenary year of the invention by T. A. Edison of his 'talking machine', we can start this review of the Rabco ST-7 by referring to the fact that when recording sound on a cylinder, the cutting stylus was attached to an arm that moved in a straight line along the cylinder parallel to its central axis and, of course, the replay stylus moved in the same manner.

Parallel or tangential tracking is still employed when cutting the master discs today in the production of gramophone records, but to use this method for playback of LPs is a difficult exercise. The pivoted pickup arm, almost universally adopted in domestic record players, has to employ offset-plus-overhang in its geometry and location on the motor board, to obtain negligible tracking error.

Audiophiles with long memories will recall the attempts by some designers to reduce the tracking error to a minimal figure (usually less than 2 degrees) by fitting a pivoted head and auxiliary arm to re-orient the head shell as it approached the record centre. Such names as Burne-Jones and Worden spring to mind in this connection, but multiple pivots introduced their problems of friction. We must also mention the problem of anti-skating devices or side-thrust compensation to counteract the inward bias movement caused by groove/stylus friction and offset geometry.

If you look at the specification above for the Rabco ST-7 turntable, you will see that the parameters of tracking error, skating force, vertical and lateral friction, are all given a zero figure. Most impressive, but does it achieve this claimed performance?

So-called 'straight-arm' turntables have long interested us, and D.A. fabricated a primitive model in pre-war years to play 78s. Coming more up-to-date, we have studied with interest the Marantz SLT-12 straight line turntable, and the predecessors of the Rabco ST-7 now under review. These models, SL-8E and the ST-4, were tricky to set up for optimum results, and had certain reliability problems. In fact, they are now discontinued, to be replaced by this new Rabco ST-7 unit, which its creators believe has solved all its snags. Yet another approach is the B & O Beogram 4002, which has a servo-driven tangential tracking arm, plus detector arm for automatic record size and speed sensing. The computer-type data unit incorporated provides fully automatic operation.

Turning now to the latest Rabco ST-7 model, the tracking drive system most cleverly tackles the mechanical difficulties. The accompanying diagram shows how it works, but by way of explanation the pickup arm is supported in a two-axis gimbal mount. The horizontal axis contains the dashpot-damped stylus elevation mechanism. In the vertical axis the arm rests on a rod that swivels a small tracking roller on a rotating shaft. When the low-mass pickup arm is tangential to the record groove, the tracking roller is set at a small angle so that the carriage travels towards the centre of the disc (at about 0·17 in. per minute). This is roughly the average velocity of the master disc when cut.

When the arm attempts to twist in angle to track pitch variations in the groove cutting, the angle of the tracking roller axis changes relative to the pulley axis. This change of angle of the tracking roller speeds up or slows down the traverse of the carriage to suit the pitch of the grooves. This correction is continuous, self-adjusting and automatic. Ingenious.

Balancing, according to the cartridge fitted, is first done by adjusting a rear counter-weight (over 10 to 15 grams), and the tracking force is accomplished by moving a sliding weight along the calibrated arm body. A control arm extends from the carriage assembly, and has a 'restrictor' arm adjacent to the cartridge head. This control arm is used for locating the carrying arm to cue a record, and the restrictor assists in aligning

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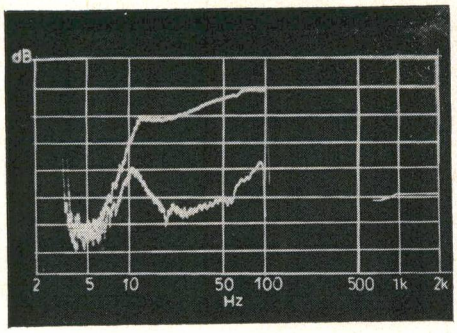
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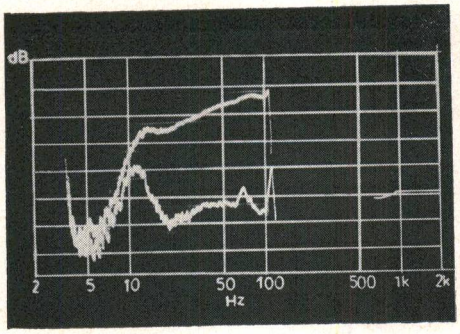
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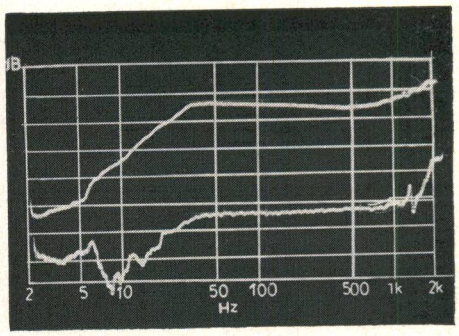
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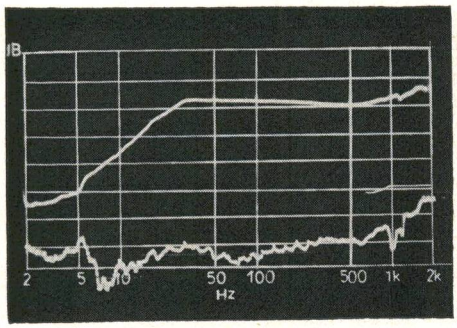
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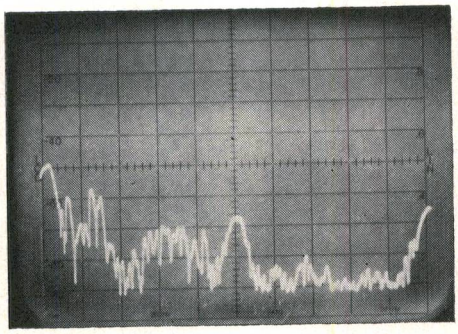
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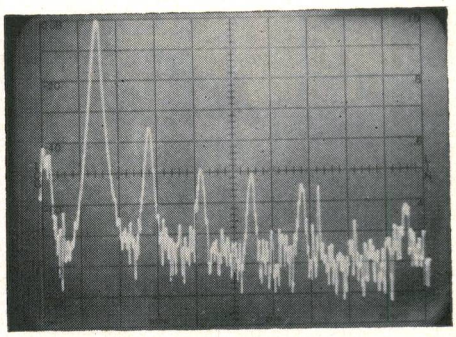
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Fig 1 *Low-frequency resonance top left bottom right, sweep 4 Hz–100 Hz, scale Hz×1 and 5 dB/div., showing resonance at 10 Hz.*

Fig 2 *Low-frequency resonance top right bottom left, sweep 4 Hz–100 Hz, scale Hz×1 and 5 dB/div. showing resonance just over 10 Hz, also minor resonance at 70 Hz.*

Fig 3 *20 Hz–20 kHz sweep, top left and bottom left-on-right, constant amplitude to 400 Hz and thereafter constant velocity, showing unusual resonance effects in the 75 Hz region (separation 20 dB at 1 kHz). Scale Hz×10 and 5 dB/div.*

Fig 4 *20 Hz–20 kHz sweep, top right and bottom right-on-left, constant amplitude to 400 Hz and thereafter constant velocity, also showing unusual resonance effects in 75 Hz region. Scale Hz×10 and 5 dB/div.*

Fig 5 *Rumble analysis ref. 10 cm/sec.=0 dB, scale 10 dB/10 Hz/div., showing hum at −66 dB (very acceptable) and main rumble components at −56 dB around 12–14 Hz (notice 2nd harmonic of hum at 100 Hz—extreme right of spectrogram). Also see under test results DIN-weighted rumble.*

Fig 6 *Harmonic distortion at 3 kHz and 10 cm/sec. Scale 10 dB/2 kHz/div. (2nd harmonic −35 dB (1·78%), 3rd harmonic −49 dB (0·354%) and 4th harmonic −50 dB (0·316%)). It was necessary to operate at 1·5 g tracking force to maintain reasonable tracking of the M24-H).*

the cartridge and in maintaining a suitable height during lift up.

From the diagram, it can be seen that the drive to the turntable is *via* a flat belt from a brushless (Hall effect) DC motor, and the functions of speed change (33⅓ and 45 rpm), speed adjustment and end-of-side lift of arm are all electronically controlled. The main power control is in a concealed position on left front of deck. When this is switched on, a red stop lamp lights up between two metal studs at the centre of the touch controls on front right of deck.

On left and right of the sensor bar are pairs of metal studs, which when touched rotate the turntable at 45 rpm or 33⅓ rpm, and light up blue and green lamps respectively. On the left of the turntable is a window through which are visible stroboscopic lines lit by a neon bulb. Fine adjustments of the two speeds can be performed by twisting two preset-set controls adjacent to the window. With very dry fingers, it was necessary to lick them before making contact with the sensor bar to operate the controls, but D. A. was the only user who found this action necessary. Incidentally, the control logic requires that the centre stop studs are touched *before* touching the control bar for a change of speed.

With the disc in position on the table, the arm carriage is located over the run-in grooves and the cue lever (on right) is pulled forward to lower the arm/cartridge slowly on to the record surface. All subsequent actions are automatic—from playing the side of a record to switching off the rotation, and lifting the arm at the run-out groove. The hinged dust cover can be raised to any desired height or removed entirely.

The Rabco ST-7 deck is supplied with integral base and hinged dust cover, plus 45 rpm adaptor and cables. The total cable capacitance is around 80 pF and is suitable for CD-4 disc replay cartridges. Overall dimensions are: 6·5 in. wide (41·91 cm.); 16·25 in. (41·28 cm.) front-to-back; 6·72 in. (17·11 cm.) with cover down, which raises to 18·75 in. (47·625 cm.), and the mechanism will operate with cover down.

As the Rabco ST-7 is supplied without cartridge fitted, we decided to check the performance of our first sample using the Shure M24-H four-channel cartridge, which gives good results on normal two-channel stereo discs. Gordon King's measurements were made at 1·25 grams, with the exception of 3 kHz., 10 cm/sec. harmonic distortion, which was checked at 1·5 grams to avoid mistracking distortion. In fact, with this specimen, we were not able to achieve the full 'tracking potential' of the Shure M24–H, and it seemed that the 'mechanical servo' of the tangential arm tended to load the groove unduly. More on this parameter below, with a second model of the ST-7. On the first unit, the arm calibration marks, when checked with a Correx gauge, indicated that a higher setting of the arm slider weight was required to arrive at the desired tracking force than indicated by the calibration marks.

Figs. 1 and 2 show that the low-frequency resonance is detected better on the break-through signal. However, since it occurs around 10–11 Hz. the sensitivity of the arm is clear of the peak of the warp velocity envelope (the best place for arm/cartridge resonance lies in the 7–15 Hz. region), and this has been achieved by the design. A very good point.

However, the LF sweeps show that an unusual resonance occurs in the 70–75 Hz. region, which is also reflected into the 20 Hz. to 20 kHz. sweeps—see captions. No unusual high frequency resonance was detected by virtue of the arm design, and the 20 Hz. to 20 kHz. sweeps reveal what would be expected from the Shure M24-H at the top end. In fact, this response is virtually the same as that given by Shure in their cartridge leaflet—a mild resonance occurs just before 20 kHz.

Wow and flutter measurements revealed a DIN-weighted nominal value of 0·07%, but the readout was swinging either side of this figure. On a second sample, much better values were obtained, nearer 0·04%. Turning to rumble measurements, on our original sample, an unweighted value ref. 10 cm./sec. via RIAA replay of −40 dB. was obtained, with the DIN-B standard weighted figure reaching −59 dB. Using the CBS-ARLL rating, on our second sample, the rumble figure was better than −60 dB.

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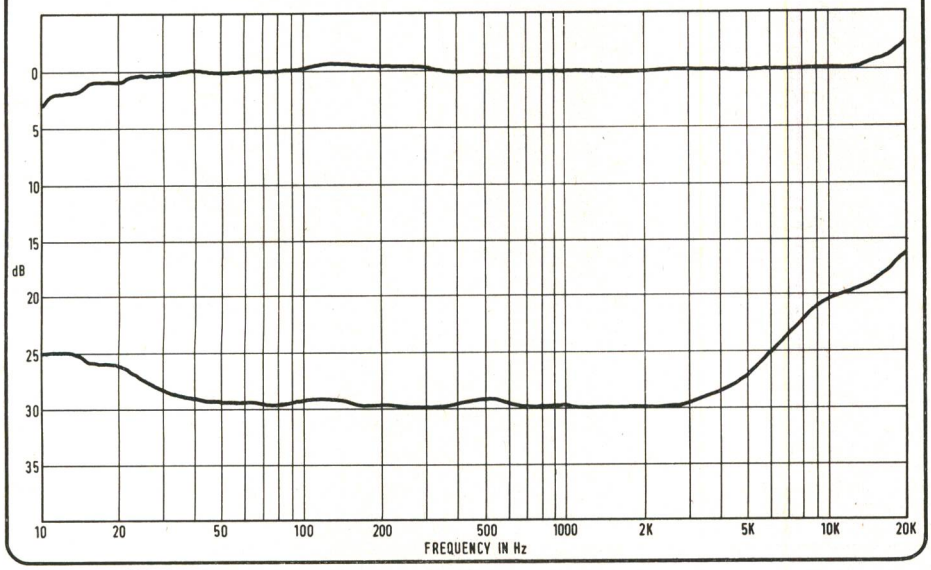
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AROUND the 1890s coin-in-the-slot phonographs started to catch the public fancy, incorporating primitive automatic operation. Coming to the mid-1920s, we find the Credenza Orthophonic model disc reproducer, which had a 72 in. long re-entrant exponential horn and a de luxe auto-record changer fitted. In 1925 Brunswick marketed the all-electric phonograph, christened the Panatrope.

These designs were to be followed by a long line of automatic record changers, including some juke-box models that grabbed the 78 rpm disc from the turntable at the end of a side with a gay abandon. One later model that always impressed me was the Thorens TD 224, illustrated on p. 89 of the October 1976 issue of HFN/RR, which could be designated a quality system.

RESPONSE OF ADC LMA-1 CARTRIDGE IN ACCUTRAC 4000 TURNTABLE SYSTEM (UPPER TRACE) AND SEPARATION CHARACTERISTICS (LOWER TRACE). (AVERAGE SMOOTHED PLOT)



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However, the Accutrac 4000 does have genuine novelty value, so let's deal with that aspect right away. Examination of current LP discs revealed that none—classical or popular—enshrined more than thirteen bands per side, and this number is reflected in the row of buttons on the control panel, plus a button marked 'ALL'. This allows a disc to be played normally, from beginning to end.

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by the recorded grooves, but is reflected back to a sensor (also in the cartridge shell) as the pickup arm passes over the 'land' or uncut spiralling between grooves. The detector output enables the system to count bands and play only those programmed by the buttons on the front of the turntable deck, or on the remote controller, of which more anon.

The 'S' shaped pickup arm is of tubular construction (measuring about $9\frac{5}{16}$ in. from stylus tip to pivot), with balancing and tracking force controlled by an adjustable, decoupled counterweight. Its cue, pause and muting functions are electronically controlled. An anti-skating control knob is also provided.

The cartridge is a special version of the ADC XLM, Mk. II, designated the ADC LMA-1. Its overall tracking force range covers 0 to 4 grams, but with the 0·3×0·7 mil elliptical stylus fitted, the tracking pressure range is from 0·75 to 1·5 grams. The 12 in. diecast aluminium alloy platter weighing about 1·4 kg (3 lb 2 oz) is a two-speed ($33\frac{1}{3}$ and 45 rpm) type, with a servo-controlled, brushless DC direct drive motor. Stroboscope markings around the rim are illuminated by a reflecting prism from a light source beneath the motorboard. Both speeds are variable over a range of about plus 2·6% to minus 2%.

The 'wireless' battery-powered remote control unit of the Accutrac 4000 (about the size of a pocket calculator) incorporates all the programming buttons. A small spherical optical sensor picks up the remote control's ultrasonic output signals, and can be sited anywhere within 3·7 m (12 ft) of the turntable, into which it plugs.

The hand-held transmitter has 'Track' and 'Control' buttons that are duplicated on the player itself, so that when the transmitter is pointed at the sensor and any button is depressed, a coded ultrasonic signal is sent to the receiver. The programme is then entered into the memory system, and a red light on the sensor winks to show that the command has been received. The frequency of the output signals appears to be around 40 kHz and it needs to be placed within line-of-sight of the remote control unit.

Test Measurements

Our checks revealed that the direct-drive system for the turntable was good, producing a wow and flutter figure of 0·04% (weighted RMS) on our sample, and the speeds did not vary when the mains voltage changed by 30 to 40 volts. Rumble was −42 to −44 dB unweighted, rising to much better than −50 dB (DIN A weighting).

On our sample, the anti-skating dial had to be set higher than the tracking force to give comparable replay distortion in both channels —nearly 3 grams for about 1·5 grams tracking force. The arm descent, as cued, requires about 2 to 3 seconds, and the full time needed for the cartridge to begin playing any given position on the record, after depressing the Play button, was about 7 seconds.

The ADC LMA-1 cartridge tracked groove velocities exceeding 18 cm/s satisfactorily at 1·5 gram pressure, and even at the higher groove velocities on the Shure TTR-102 test record, the IM distortion was around 2%. On the Shure TTR-103 disc, the 10·8 kHz tone burst tests revealed low distortion up to 20 cm/s and tolerable results right up to 30 cm/s.

The frequency response of the ADC cartridge was flat within one dB or so up to 10 kHz and only rising a few dB to +3 dB at 20 kHz. Channel separation was better than 30 dB in the mid-range and 12 to 15 dB at the upper end around 20 kHz.

User Checks

The BSR designers have ingeniously wedded the disc player to a microprocessor system, consisting essentially of a small special purpose computer based on LSI (large scale integration) circuits, allowing the computer's memory to store a number of instructions and to execute them on subsequent commands.

The computer control system worked exactly as stated, including the strengths and limitations detailed in the excellent instruction manual. With almost all the records we used, no trouble was experienced with the optical track locating system, remembering that transparent or translucent discs cannot be played automatically because not enough light is reflected to the photo-cell to trigger the automatic circuits. They can, of course, be played normally by pressing the ALL button.

Dusty discs or off-centre pressings gave no trouble in replay, but some old LPs with irregular banding, wide 'land' or heavily over-recorded sections either stuck in the groove or triggered the lift mechanism. Some LPs with variable thickness run-in grooves can cause a one-band error on replay, but this was an infrequent problem. Forward/backward buttons would be a useful addition to the controls.

An admirable feature is the servo-controlled pickup arm lowering mechanism, which operates accurately and gently, both manually and by remote control. The convenience and comfort of remote control operation—other than actually putting the discs on the turntable—must be experienced to be fully appreciated. No jumping up and down to cue-in or repeat favourite sections of an LP, and none of the compromise factors usually associated with record changers or some semi-automatic turntables.

The designers at BSR, in the Midlands—and remember this is a British effort—could have compromised with the standard of the pickup and drive mechanism, after spending so much developing the 'hands off' operation features. The longer I used the Accutrac 4000 unit, the more I became wedded to its automation and overall performance. If you want this degree of versatility and convenience and the price is a deterrent, consult your bank manager. It's worth it. ●

Rabco ST-7

Perhaps a more revealing picture of the rumble—on the first sample machine—is given in the Fig. 5 spectrogram on a very slow sweep over 0–100 Hz. with 3 Hz. analysing filter (i.e., 10 Hz. per division horizontally). This shows that most rumble energy resides in the 12–15 Hz. and 30–35 Hz. areas. The component at 50 Hz.—centre of spectrogram —is 50 Hz. mains hum, and the start of the component at the 100 Hz. point is the second harmonic of this. The spectrogram refers to 10 cm./sec. velocity and the scale vertically is 10 db/division.

Motor speed accuracy at $33\frac{1}{3}$ rpm is within ±2%, although we had difficulty in adjusting to the correct 45 rpm. speed, even within the range of adjustment by the pitch control. The second sample had no trouble with this speed, and the speed adjustment range was nearly ±5%.

From the foregoing information, it will be apparent that our later test sample of the ST-7 was better than the first model. It must be mentioned, too, that the cartridges fitted for the later specimen included the Ortofon M15E and one of the top class AKG series, newly released in the UK.

To summarise our experiences with this latest Rabco ST-7 design, unquestionably it has been significantly improved since its launching as the SL-8 separate pickup arm in 1968, emerging in late 1970 as the ST-4 deck, complete with turntable. But the latest Rabco unit does require considerable time and care spent on setting it up correctly to obtain optimum results, and it must not be handled in a rough cavalier fashion. Here the well-written and illustrated Owner's Manual and the Technical Manual will prove invaluable, with detailed assembly instructions and troubleshooting sections.

It is essential that the plinth is set up in a completely level horizontal plane, and fitting the cartridge on the arm must be done carefully. It can be tricky to position the slide bar over the lead-in grooves of a disc, as there is some small drift to left or right when lowering the carrying arm. Peter Philips, engineer in charge of the Amsterdam product checking and servicing centre for Harman-Kardon in Europe, informed us that the latest models passing through his department will have the arm lowering height reduced, which overcomes this lack of precise verticality in dropping. One plus feature of the system is its ability to cope with warped records, unlike many pivoted arms. The lack of anti-skating compensation is another useful attribute of the straight-line tracking system.

The starting torque on the ST-7 allows a faster run up to speed of the turntable than on many motors, and the minimal frictions, laterally and vertically, allow a lower tracking force to be employed. Critical listening—and comparison with a system fitted with a high-grade pivoted arm and the same cartridge—revealed little improvement audibly, but on a few test bands, definition at low frequencies and a more defined stereo image were claimed by some listeners.

Undeniably, the RabcoST-7 is a handsome and sophisticated piece of record playing equipment, whose exposed parts and tracking shaft must be kept clean to maintain optimum performance. Recommended to the affluent audiophile, who seeks a turntable/pickup/arm combination different from other top grade designs.●

Readers' Problems

Arm/Cartridge Compatibility

Dear Sir, After employing various 'conventional' cartridges, such as the V15/III, XLM/II and the Micro-Acoustics QDC 1E, I recently started using a Fidelity Research 1, Mk. II moving-coil type in my SME/II (fixed head) shell. I have been delighted with the significant increase in realism that this change has brought, but certain other problems have arisen.

Firstly, there has been some deterioration from the tight, clean bass response of the Shure V15, presumably as a result of a different arm/cartridge resonance frequency. This is not extreme, but I would like to improve it if possible. Cartridge mass is high at 10·6 g, but I have not seen any static compliance figure for the FR model, so I am confused as to whether it is a low-compliance device requiring a 'massy' arm, or high-compliance needing minimization of inertia in the arm setting.

I have found that by using the SME lightweight mounting nuts and bolts, removing the finger lift, filing it down and remounting it nearer the pivot (opposite the arm rest) effective mass was reduced by 16%, permitting resetting at a lower inertia level.

Contrary to recent test findings, I found that this combination at the recommended 1·7 g, would then track the super high level lateral band on the well-known HF 75 test-disc with no audible distortion, through Spendor BC1s.

Having said all this, would a damped arm clean up the bass response? Two more questions, please: could the system be improved by a better amplifier? If so, which amplifiers should I consider, bearing in mind input sensitivity suited to my Fidelity Research cartridge, even with its transformer?

Finally, is there any possibility that a turntable change could give a firmer, cleaner bass? I currently use a well maintained TD150 about 3½ years old, with no audible rumble apparent from the usual test-disc tracks. However, feedback and not rumble is the relevant factor in this particular problem. I have a suspicion that 'strapped down' turntables are better isolated from low frequency feedback than floating types.

I suggest that there is a distinction to be made between feedback transmitted through furniture/wall/floor vibrations and that transmitted directly through air vibrations. In the former type, the floating suspension would give better isolation, but could be more microphonic to direct acoustic waves.

Arm/cartridge resonances are much discussed, but platter/room resonances don't appear to be! As I see it, the Linn Sondek, Ariston, etc, tables are essentially identical in design to the Thorens TD150 and 125, except that their platters are 30% heavier, which may have significance. Is it worth experimenting with a 'solid' mounting of the 150 and SME arm, isolated from each other?

R. C. G. L., Johannesburg, 2196, R.S.A.

(1) We have not yet had an opportunity to test the FR cartridge, so we can offer no detailed comments on its specification or performance. We can only say that we have listened to one performing perfectly well (as judged through Stax headphones) when mounted in the SME 3009/II arm. We believe, without being certain, that it is akin to the Ultimo, in that it is a relatively low-compliance high-mass cartridge, which does not necessarily require an arm of higher mass, although it will perform better in such conditions than a high-compliance one.

(2) There are other possible causes for slight bass response degradation, e.g. PU transformer —and, as you suggest, the amplifier. We don't know what amplifiers are available to you, but the NAIM is very good, and so is the new Quad 405, the Harrison and the Yamahas, among others.

(3) Yes, in any 'solid' form of mounting it is desirable to isolate the PU arm. The direct-drive models do have advantages in respect of rumble, wow and flutter, and in the case of the better ones, e.g. Lux 131 and Technics 120, anti-vibration mounting also. The Linn-Sondek is also very good. In general, platter/room resonances are not of much importance; the simplest way to overcome feedback, if it arises, is by wall-mounting the turntable.

(4) In our view, confirmed by recent research, a small amount of damping in pickup arms is beneficial, but the amount is critical for the cartridge in use.

We would direct your attention to an article by Happ and Karlov in the Journal of the A.E.S., Vol. 24 No. 8 October 1976, which we think you will find of interest, as it covers some of the points raised in your letter in depth.

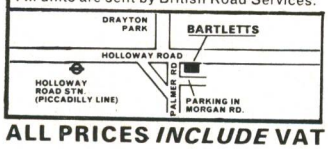
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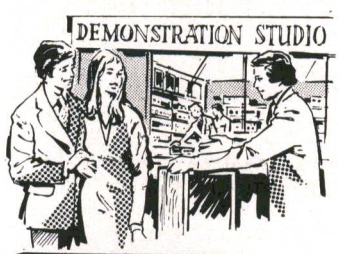
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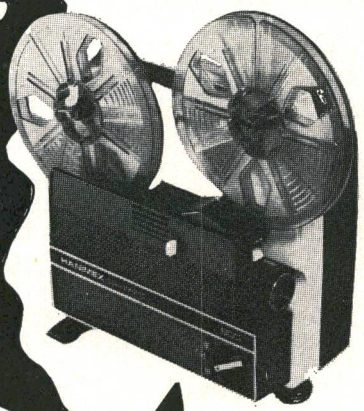
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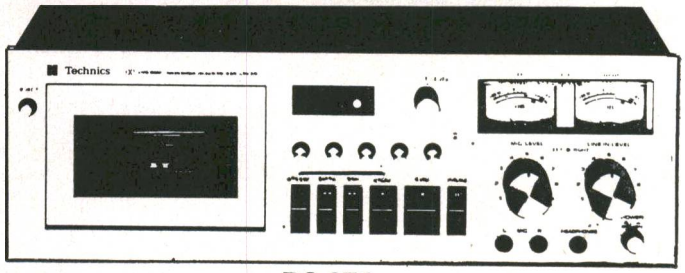
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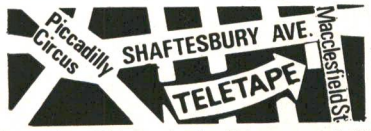
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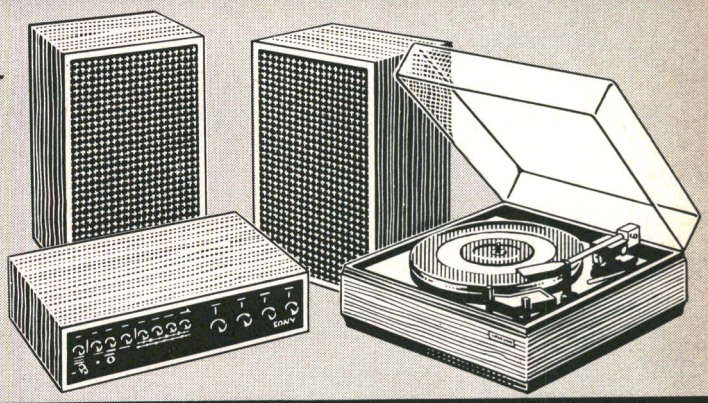


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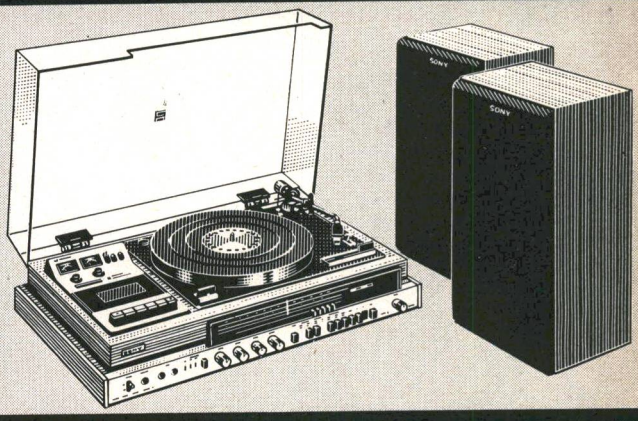
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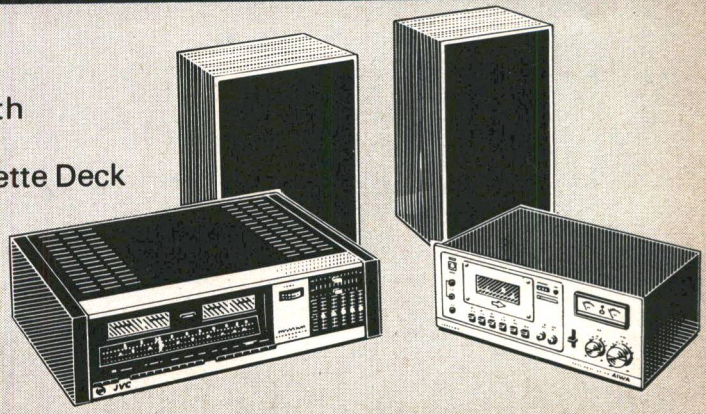
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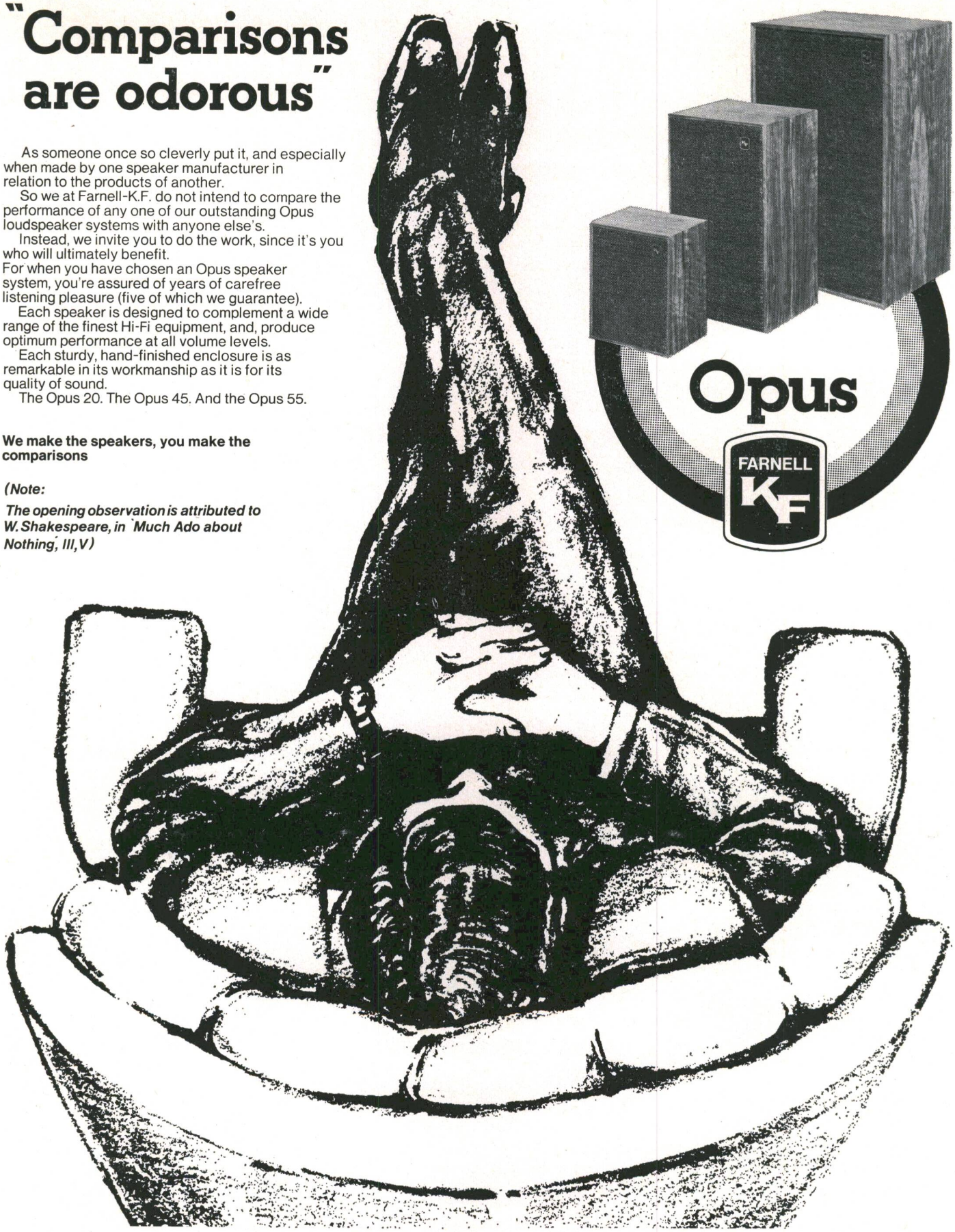
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Sansui 881	£274·00
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Sony STR6200F	£257·00
Toshiba SA300L	£95·00
Trio KR5400	£169·00
Trio KR7200	£194·00
Trio KR6400	£199·00
Trio KR7400	£209·00

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Akai 4000DS	£121·00
Akai GXC630DB	£385·00
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Akai GXC325D	£223·00
Akai GXC740D	£267·00
Akai GXC310D	£165·00
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Sony TC135SD	£109·00
Sony TC136SD	£129·00
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SONY HMK40A
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Our Price £59.95



SONY CF210L
This versatile cassette radio features LW/MW/ SW/VHF radio, built-in mike and mains adaptor, auto shut-off. Runs on battery or mains

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Sony TC 207	45.95
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Our Price £43.95



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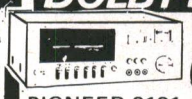
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Sony 7025	132.95
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National ST2300	P.O.A.
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hi-fi news & record review ANNUAL 77

Following an established and popular pattern three special features and three 'regulars' come together in the 1977 edition of *Hi-Fi News and Record Review Annual:*

SPECIAL FEATURES

MUSICAL LANDSCAPES
A survey of scenic programme music compiled by John Crabbe.

HIGHER FIDELITY FROM OLD RECORDS
Peter Adamson looks at the 78 rpm disc and suggests how to do it justice with modern equipment.

VERTICAL F.E.T.s in POWER AMPLIFIERS
Basil Lane fills in the background to an ongoing and intriguing design trend.

REGULAR FEATURES

AUDIO INDEX
A guide to hi-fi brand names.

CLASSICAL RECORD LIBRARY
An updated index of the better recordings compiled by Peter Gammond.

EQUIPMENT REVIEWS
For convenient reference reviews are reprinted from HFN/RR, October 1975 to September 1976 issues.



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The great majority of shops buy a wide range of products from which the individual has to make his selection, the choice of which is often greatly influenced by magazines such as *Hi-Fi News*, specialist surveys such as Hi-Fi Choice, advertising and so-called discount prices. We, at Hampshire Audio, behave like the individual buyer but with a difference—a wealth of practical day-to-day experience. We are therefore able to come to our own conclusions on value for money, and sometimes these are at variance with the hi-fi press and at other times in accordance, though it may be for different reasons.

Granting the excellence of, say, Yamaha's current series of receivers, Aiwa's cassette decks, Celef's loudspeakers, there are alternative value for money products within other manufacturers' ranges, but we still prefer to rely on our experience rather than formulae for helping the customer to determine the product best suited to his requirements. Furthermore, we then still insist on a pre-sale check irrespective of make of the unit purchased to ensure that it is of the standard that we expect. Such equipment is then covered by our own minimum two year labour and parts guarantee, and should servicing be required outside the appropriate guarantee period, this is charged out at no more than actual cost.

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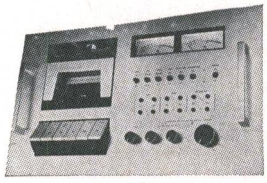
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GXC310D .. £175·00
GXC710D .. £189·00
GXC75D .. £205·00
GXC325D .. £226·65
GXC740D .. £272·50
GXC760D .. £334·50

Amplifiers
AM2200 .. £88·00
ATM2400 .. £131·90

Tuners
AT2200 .. £84·50
AT2400 .. £131·90

Receivers
AA1010 .. £116·25
AA1020 .. £159·95
AA1030 .. £178·50

Headphones
ASE20 .. .. £16·50
ASE22 .. .. £17·50

Microphones
ADM20 .. £9·00
ADM80 .. £15·00

ARISTON

RD11 .. .. £94·50
Plus SME 3009 £138·00
3009/S2 .. £142·00

CONNOISSEUR

BD1 Kit .. £13·27
BD2/SAU Chas. £34·31
BD2/SAU/BC .. £45·48

CELESTION

Ditton 15 .. £93·00
Ditton 33 .. £143·00
Ditton 44 .. £170·00
Ditton 25 .. £197·00
Ditton 66* .. £280·00
UL6, 8, 10 .. P.O.A.

GARRARD

GT55 .. .. £103·25
DD75 .. .. £98·50
86SB Mk II .. £67·25
SP25 .. .. £37·80
All with B/C & Cartridge
SP25 Chassis .. £21·00

JVC

Receivers
VR5505L .. £83·50
JRS100 .. £115·00
JRS200L .. £203·50

Amplifiers
JAS8 .. .. £187·00
JAS31 .. .. £107·00
JAS11 .. .. £74·00

Tuners
JTV6 .. .. £125·00
JTV31 .. .. £92·75

Turntables
JLA15 .. .. £62·00
JLA1 .. .. £59·50

Cassette Decks
CD1740 .. £82·50
CD1667 Mk II ANRS .. £111·50
CD1770 .. £185·90
CD1920 .. £130·00
CD1635/II Portable .. .. £195·00

Cartridges
X1 .. .. £50·95
4MD 20X .. £38·75
4MD 10X .. £33·60

Styli
4DTX1 Shibata £33·00
4DT20X .. £19·60
4MD10X .. £18·50

KOSS

K6 .. .. £15·95
K6LC .. .. £17·95
PRO44A .. £57·95
HV1A .. .. £28·95
HV1LC .. £32·75
HV2 .. .. £19·95
PRO5LC .. £41·95
Phase 2 .. £45·75
Technician VFR £43·95

PIONEER

Amplifiers
SA7500 .. £181·75
SA7300 .. £124·00
SA6300 .. £80·75
SA5300 .. £65·50

Tuners
TX9500 .. £199·95
TX7500 .. £144·50
TX5300 .. £73·50

Receivers
SX750 .. .. £247·00
SX650 .. .. £207·00
SX550 .. .. £147·50
SX300 .. .. £80·00

Turntables
PL117D .. £101·95
PL115D .. £68·75
PL112D .. £61·50

Cassette Decks
CF5151 .. .. £117·75
CF2121 .. .. £138·50

Headphones
SE305 .. .. £15·25
SE205 .. .. £9·75

ROTEL

Amplifiers
RA212 .. .. £53·50
RA312 .. .. £65·50
RA412 .. .. £79·50
RA612 .. .. £109·25
RA812 .. .. £140·00
RA1312 .. .. £241·80

Tuners
RT224 .. .. £58·25
RT324 .. .. £74·75
RT624 .. .. £109·50
RT724 .. .. £87·50

Receivers
RX102 Mk II .. £79·00
RX152 Mk II .. £91·00
RX202 Mk II .. £101·50
RX402 .. .. £139·50
RX602 .. .. £179·50
RX802 .. .. £224·50

Music Centre
RM5010* .. £316·00

RICHARD ALLAN

Minette .. .. £38·00
Chaconne II .. £43·25
Flamenco II .. £61·75
Maramba .. £68·25
Pavane*† .. £86·50
RA8 .. .. £54·50
RA82 .. .. £87·25
RA82L*† .. £104·50
RA828LP*† .. £163·35

Kits
Twin* .. .. £27·25
Triple 8* .. £41·50
Triple 12 .. £51·00
Super Triple 12 £59·75
RA8 .. .. £38·00
RA82 .. .. £61·75
RA82L .. .. £68·25

THORENS

TD160/BC .. £65·50
TD160/C .. £79·75
TD125 .. .. £94·00
TD160/II/BC .. £82·00
TD160/II/C .. £99·00
TD166/II/C .. £87·00

TRANSCRIPTORS

Hydraulic Ref. £110·00
+Arm .. £136·00
Electronic Ref. £125·00
+Arm .. £150·00
Prisma .. .. £197·00
+Arm .. £222·00
Sweep Arm .. £5·19
Stylus Brush .. £3·17

WHARFEDALE

Chevin XP* .. £29·95
Denton 2XP* .. £44·00
Linton 3XP .. £63·00
Glendale 3XP* £85·75
Dovedale SP* £147·00
Airedale SP* .. £238·00
Walnut Finish 2½% extra

Kits
Linton 2* .. £22·25
Denton 2XP* .. £23·75
Linton 3XP .. £35·50
Glendale 3XP .. £49·75

CARTRIDGES

Shure
M3-D .. .. £5·73
M44-7 .. .. £7·35
M44-E .. .. £7·77
M55-E .. .. £8·72
M75-B .. .. £11·11
M75-EJ .. £13·66
M75-ED .. £16·30
M95-EJ .. £14·21
M95-ED .. £20·65
M24-H .. .. £27·16
V15-E3 .. .. £48·78

Stanton
681EEE .. .. £47·25
680EEE .. .. £30·50
500EE .. .. £20·25
500E .. .. £17·50

Goldring
G820 .. .. £8·55
G820E .. .. £12·26
G820SE .. £17·16
G900 .. .. £32·50

J.V.C.—*See under J.V.C*

Cartridge price includes the Stylus. All genuine items in makers box.

STYLI

Shure
N3-D .. .. £4·02
N44-7 .. .. £5·20
N44-E .. .. £5·80
N55-E .. .. £6·79
N75-B .. .. £6·55
N75-EJ .. .. £8·66
N75-ED .. .. £12·06
N95-EJ .. .. £9·55
N95-ED .. .. £16·37
VN35-E .. .. £17·83
VN15-E(2) .. £16·95
VN44-3(78) .. £5·90
N75-3(78) .. £5·90
N95-3(78) .. £5·90
VN78(78) .. £16·95

Stanton
D6800EEE .. £24·50
D6800EE .. £21·75
D5100EE .. £13·95
D5100E .. £11·50

Goldring
D130 .. .. £3·43
D130E .. .. £7·14
D130SE .. £10·97
D120SR .. £2·81
D110SR .. £3·37
D110E .. .. £7·09
D110SE .. £11·92
D110 120 (Std) 78 £3·37

MAIL ORDER: Please add carriage and insurance as follows. Amplifiers, Receivers, Decks etc, **£2·50.** Speakers, **£3·50.** Items marked †, **£6·00.** Headphones and microphones, **75p.** Cartridges and Styli, **25p.** (Mainland only.) Prices include VAT. We reserve the right to amend prices without notice. E. & O.E.

IMPORTANT NOTICE

Due to the present currency problems we expect many of the prices in this advertisement will have been increased by the manufacturers before this magazine is published. We regret any inconvenience this may cause, but we will be pleased to quote where such changes have occurred. It is our policy to maintain present prices as long as stocks last. Thank you for your co-operation and understanding of a situation that is beyond our control.

Prices on application for:

ARMSTRONG, BOWERS & WILKINS, FONS, FORMULA 4, KEF, NAKAMICHI, QUAD, SME, TANDBERG, TANNOY, TECHNICS, YAMAHA.

CASSETTE TAPES

	C45	C60	C90	C120
MAXELL				
UD	£0·99	£1·14	£1·30	£1·77
UDXL	—	£1·30	£1·63	—
Super LN ..	—	£0·63	£0·82	£1·03
TDK				
D	£0·56	£0·65	£0·90	£1·15
SD	—	£0·82	£1·15	£1·60
SA	—	£1·15	£1·65	—
Audua ..	—	£1·12	£1·60	—
BASF				
LH	—	£0·64	£0·86	£1·16
Super	—	£0·93	£1·25	£1·62
CrO2	—	£1·24	£1·56	£2·00
FeCr	—	£1·56	£2·00	—
SONY				
K	—	£0·60	£0·80	£1·10
CrO2	—	£1·23	£1·56	

** Limited stock.*
Post: **15p** per Cassette; **30p** for 5 Cassettes; **45p** per 10 Cassettes.

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115 Kingsway (Holborn) WC2
01-405 0446
Full range of Yamaha on demonstration, also at
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Watford 26602

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(600 yards north Tally Ho Corner)
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4 High Street, Walthamstow E17
01-520 4121
everything from pocket radios to colour TV and Hi-Fi

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Tel: 01-723 3071 (nr Marble Arch

115 Kingsway, London WC2
Tel: 01-405 446

48 London Wall, London EC2
Tel: 01-628 0537

21 London Rd, Barking, Essex
Tel: 01-594 0239

4 High St, Walthamstow, E17
Tel: 01-520 4121

169 Fore Street, London N18
Tel: 01-807 2807

8 Turnpike Pde, London N15
Tel: 01-888 4373

4 Hadley Pde, High St, Barnet
Tel: 01-449 8278

857 High Road, Finchley, N12
Tel: 01-445 3319

94 The Parade, High Street, Watford, Herts. Tel: 92 26602

152 Rye Lane, Peckham, SE15
Tel: 01-639 2205

61 Seven Sisters Road, London N7 Tel: 01-272 7901

Ferrograph Logic 7 -and professional tape handling.

Watch a recording engineer at work, and immediately you notice the importance of tape handling. Talk to him about your requirements of domestic recording equipment, and he'll tell you how Logic 7's tape handling will give you professional results.

Firstly, push button operation

Finger-tip control of the deck transport via logic circuits gives you fast and safe response to all commands. No risk of tape snatch, no accidental erasures. Driving and braking forces are applied correctly at all times. The Pause control enables you to set-up the machine for an instant start.

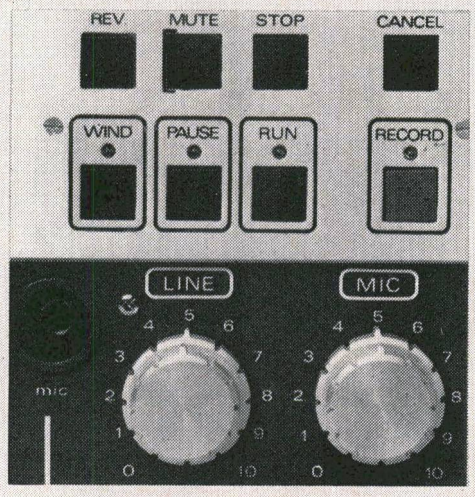
Secondly, consider editing

Logic 7 makes the location of selected items quick and exact. It has a four-digit tape position indicator and a single control providing any spooling speed from maximum rewind to maximum forward wind. At any spooling speed a push-button can be operated to reverse direction and, incidentally, is one of the functions that can be controlled remotely. All sound can be eliminated during spooling by operating a Mute switch. An open-face head block provides direct access to the tape for splicing operations.

Thirdly, flexibility of use

Logic 7 facilities include:

- Spool capacity up to 10½ inches
- Single-knob speed change
- Mic/Line mixing
- Separate Master Record control
- Tape motion sensing
- Individual level/tone controls for L and R channels
- Track-to-track transfer, echo, A/B comparisons
- Three speeds: 15, 7½ and 3¾ in./sec.



Fourthly, choice of models

Logic 7's are available in 8 versions:

- With or without power amplifiers and speakers
- For half or quarter-track operation
- With or without Dolby noise-reducing circuits

Ask a professional. He'll tell you: Logic 7. British quality engineering at its best, backed by established Ferrograph service.

Only specially appointed Ferrograph dealers can give you a demonstration of Logic 7. For the name and address of your nearest stockist and more information about Logic 7 please use the coupon.

Wilmot Breeden Electronics

Ferrograph Rendar Wayne Kerr

Wilmot Breeden Electronics Limited,
Durban Road, Bognor Regis,
West Sussex. PO22 9RL
Telephone: Bognor Regis 25811
(STD Code 02433)

Please send me further information on Logic 7.

Name

Address

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Durban Road, Bognor Regis,
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FERROGRAPH *Logic 7* **The tape recorder of distinction**

the best choice...

Comet have been discounting Hi-Fi since 1968 and that makes us not only the biggest but one of the oldest-established discounters in the UK.
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As specialists in the Hi-Fi field we give you expert, on-the-spot advice – whether you need a budget-priced audio system, a super stereo installation or wall-to-wall quadraphonic sound.
Remember, you choose only from the best at Comet . . . the company that's high on fidelity and low on price.

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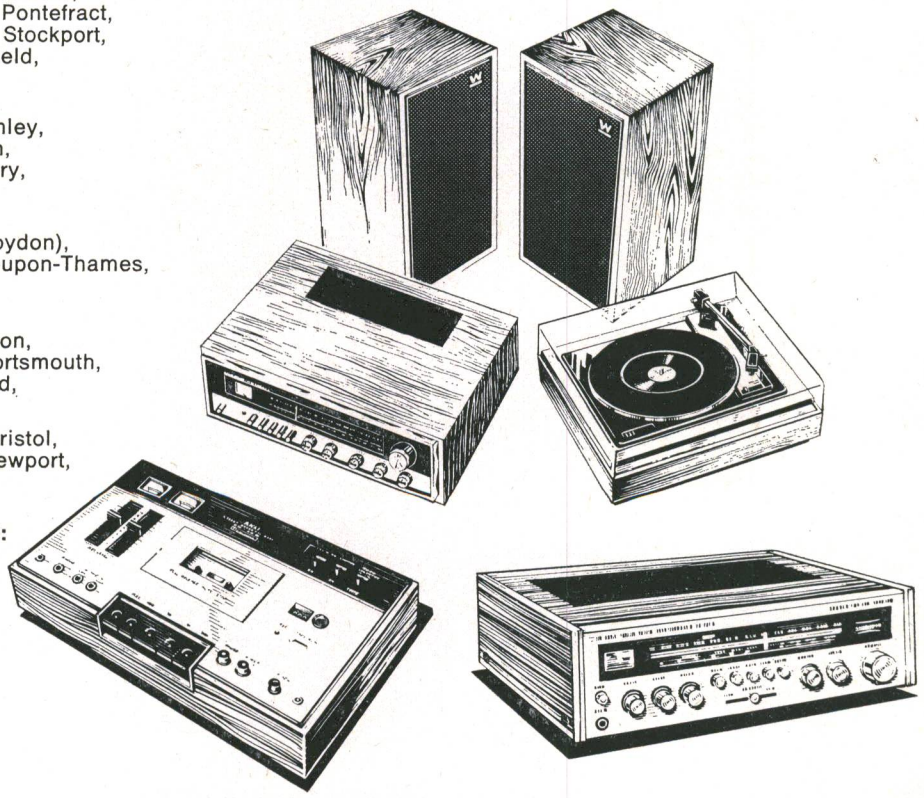
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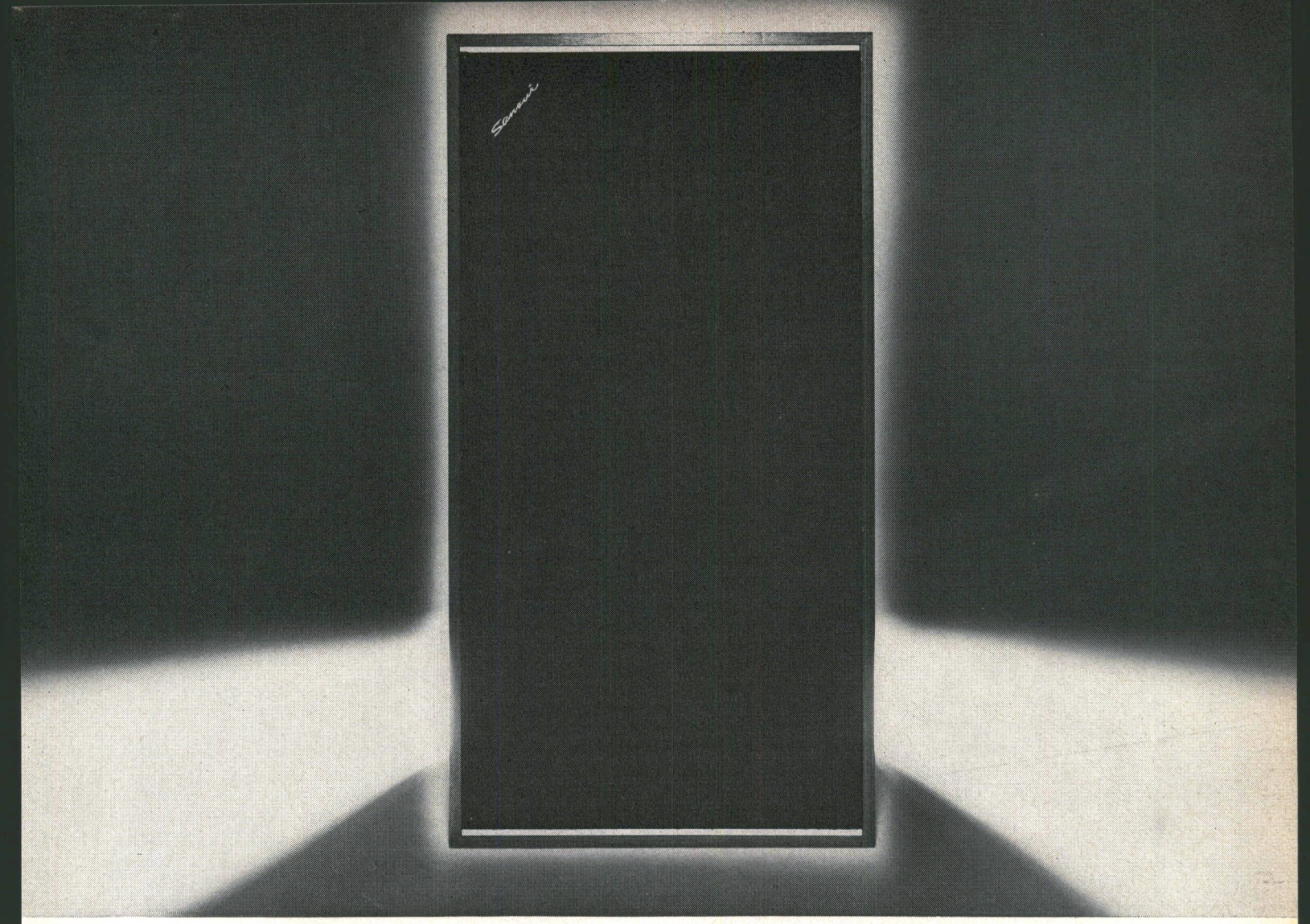
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WALES AND SOUTH WEST: Bristol, Cardiff, Exeter, Gloucester, Newport, Plymouth, Torquay.

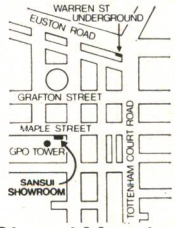
ECLIPSE DISCOUNT STORES: Bristol, Cardiff, Dudley, Edinburgh, Glasgow, Harrogate, Manchester, Swansea, Willenhall.





Prima Donna.

I'm the Sansui ES200 Improved, and I'm getting rave reviews. I think you should introduce me into your home, because my design is based on acoustic research gathered from the conditions in which you live and listen to music. I've got 60 Watts peak power capacity, a 3-way, 3-speaker system. I've been highly acclaimed for my natural sound, designed to satisfy the demands of critical European ears. If you're critical and exacting about sound, listen to me. However, if you think I'm too much for you, I can introduce you to some of the smaller members of my family. They get pretty good reviews, too!



Closed Mondays

Sansui

Thank you for listening

Sole distributor for the UK:
Vernitron Ltd., Thornhill, Southampton SO9 5QF, England.
Sansui Audio Europe N.V., North Trade Building, Noorderlaan 133, 2030 Antwerp, Belgium.
Sansui Electronics Corporation, 55-11 Queens Boulevard, Woodside, N.Y. 11377, U.S.A.
Sansui Electric Co. Ltd., 14-1, 2-chome, Izumi, Suginami-ku, Tokyo 168, Japan.

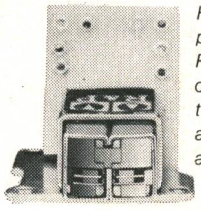

R&P
3 HEAD SYSTEM / FULL AUTO STOP



Hitachi D-3500

What you see on the opposite page are some of the things that make our D-3500 cassette deck something special. It certainly is an impressive looking machine. But we're not selling looks.

The D-3500 has three heads, like professional reel-to-reel tape decks. The Record and Play heads are gapped differently, according to their function. So-called combination heads are a compromise, and our D-3500 is a no-compromise product.



Hitachi engineers succeeded in placing independent Record and Play heads side by side in a compact housing that gets around the limitations of cassette design and locks the heads in perfect alignment.

With three heads, off-tape monitoring is possible, too. The touch of a button allows you to compare the original source with your tape a moment after it's recorded. And double Dolby* systems allow encoding and decoding to take place simultaneously, so the taped signal you monitor is identical to the sound you'll hear when running the tape in the Play mode.



The D.C.C.S. Dolby calibration system includes a signal generator for precise calibration with any tape. And you don't have to be an engineer to use it.

The D-3500 has dual metering systems, too, giving you either VU or Peak readings. It features Mic/Line mixing, a Dolby calibration system, and a transport with a 0.05% wow and flutter spec.

Is it as good as the average reel-to-reel deck? Don't be absurd. It's better.

IMPORTANT SPECIFICATIONS

Wow & Flutter	*0.05% (WRMS)*
Freq. Response	*20–20,000Hz. (using CrO_2 tape)*
Signal-to-noise ratio	*63dB (Dolby On)*
	55dB (Dolby Off)

* Dolby is a trademark of Dolby Laboratories, Inc.

HITACHI

Hitachi Sales (U.K.) Ltd., Hitachi House, Station Road, Hayes, Middlesex UB3 4DR. Telephone 01-848 8787.

GOOD NEWS FROM **Connoisseur**



THE NEW BD2/A

Based on the popular BD2, the new BD2/A offers the hi-fi enthusiast all the features usually associated with Connoisseur turntables, such as low rumble, wow and flutter, plus the addition of an automatic pick-up arm lift-off at the end of the record. This is achieved by an ingenious, though simple, electro-magnetic system, which avoids having any physical contact with the pick-up arm. It is possible, therefore, to use top quality cartridges, tracking at less than one gram, without putting any extra side pressure on the stylus.

The BD2/A comes either as a chassis model, or mounted on a slimline plinth, standing on rubber anti-vibration feet, finished in genuine American walnut, and fitted with a bronze, hinged dust cover. For those with restricted space, a compact plinth measuring only 13½"×15½"×5⅛" is still available.

Specification
Rumble - 65dB when measured in accordance with DIN 45539 using weighting network, referred to 7cm/sec. at 330Hz.
Wow and flutter Less than 0,1%.
Hum level - 80dB.

The BD2/A sells for a recommended price of only £55.00 + VAT. Ask your local hi-fi dealer, or write to the factory, for further details.

Connoisseur

Manufactured by:- **A. R. Sugden & Co (Engineers) Ltd.**, Atlas Mill Road, Brighouse, West Yorkshire, HD6 1ES.
Telephone: Brighouse (04847) 2142. Telegrams & Cables: Connoisseur, Brighouse.

APPOLO

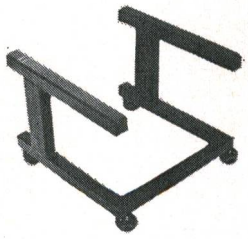
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MADE IN THE U.K.

AVAILABLE FROM LEADING HI-FI DEALERS



Sabre I



Sabre II



Appolo II

ALL APPOLO MODELS ARE MANUFACTURED IN HIGH GRADE STEEL AND COATED IN NYLON

APPOLO WALL BRACKETS



With swivel action. For speakers up to 50lb weight. Complete screws and Rawlplugs. **£9·00** a pair inc. VAT

For Brochure and Dealer List send stamped addressed envelope to:

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13 FAMET AVENUE, PURLEY, SURREY CR2 2DN.
Telephone: 01-660 4780

Here's the answer to all your Hi-Fi storage problems!



FREE COLOUR leaflet

this **multi-way** MUSIC CONSOLE

Complete your Hi-fi installation with one of these elegant units. Ample record storage space. Shelves for amplifier/tuner etc. plus space for cassettes, books, and magazines. Attractive styling to give your stereo the prominence it deserves.

Size: Height 21·5", Depth 15", - adjustable length extends from 48" to a full 82" wide span!

'Multi-way' extension plinth gives adjustable length and a variety of layout combinations to suit your own requirements. Solid construction with heat/scratch resistant melamine surface.

White (as illus.) ONLY £37·50 +£2·30 carriage.

Also available in teak-style finish. Alternative designs available.

14 day money back guarantee ☎ (0752) 61668

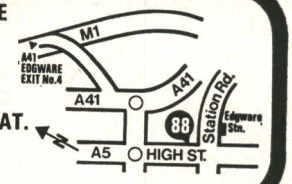
Don't delay - send now for your free colour leaflet to:

Leisure Time Ltd **DEPT. N3, CROZIER RD., MUTLEY, PLYMOUTH.**

PLANET HI-FI CENTRE

SERVICE Service is our keynote and has been since we were founded in the 1950's. We guarantee to provide parts and labour absolutely free of charge for 12 months on any item purchased from Planet and returned to us as faulty. We only sell goods that we consider to be reliable and backed by reputable manufacturers. All prices quoted are for cash or cheques backed by cheque card. We will be pleased to accept ACCESS or BARCLAYCARD. **SATISFACTION GUARANTEED**

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AMPLIFIERS

Armstrong 621	P.O.A.
Cambridge P60	P.O.A.
Harman Kardon	P.O.A.
Pioneer SA5300	£64·50
Pioneer SA6300	£79·50
Pioneer SA7300	£123·75
Pioneer SA7500	£183·00
Pioneer SA8500	£208·00
Pioneer SA9500	£279·00
Pioneer SA9900	£414·50
Quad 33/303/405	P.O.A.
Rotel RA312	£61·25
Rotel RA412	£75·25
Rotel RA712	£92·00
Rotel RA812	£131·75
Rotel RA1312	£222·00
Rotel RA1412	£290·50
Sansui AU2900/AU3900/AU4900/AU5900/AU7900	P.O.A.
Tandberg TA300M	P.O.A.
Yamaha CA410	P.O.A.
Yamaha CA610	P.O.A.
Yamaha CA800 Mk II	P.O.A.
Yamaha CA1000 Mk II	P.O.A.

TUNER/AMPLIFIERS

Aiwa 3060A Cass./Receiver	P.O.A.
Aiwa 5050 Music Centre	P.O.A.
Aiwa 5080A Music Centre	P.O.A.
Akai AA1020	P.O.A.
Armstrong 625/626	P.O.A.
Goodmans Module 90	£126·00
Goodmans Mod 90 Compact	£223·00
Goodmans One-Twenty	£143·50
Goodmans One-Fifty	£209·00
Harman Kardon	P.O.A.
Pioneer SX450	£120·50
Pioneer SX550	£148·75
Pioneer SX650	£209·00
Pioneer SX750	£249·00
Pioneer SX850	£333·25
Pioneer SX950	£376·25
Pioneer SX1250	£575·00
Rotel RX202 Mk 2	£94·00
Rotel RX402	£130·00
Rotel RX602	£166·00
Rotel RX802	£210·25
Rotel RM5010 (Music Centre)	£290·75
Sansui 221/331/551/661/771/881/8080/9090	P.O.A.
Tandberg TR220	P.O.A.
Tandberg TR1040P	P.O.A.
Tandberg TR2055	P.O.A.
Tandberg TR2075	P.O.A.
Yamaha CR200	P.O.A.
Yamaha CR400	P.O.A.
Yamaha CR450	P.O.A.
Yamaha CR600	P.O.A.
Yamaha CR800	P.O.A.
Yamaha CR1000	P.O.A.

TUNERS

Armstrong 623/624	P.O.A.
Cambridge T55 VHF	P.O.A.
Harman Kardon	P.O.A.
Pioneer TX5300	£73·25
Pioneer TX7500	£143·00
Pioneer TX9500	£197·75
Quad FM3	P.O.A.
Rotel RT324	£70·00
Rotel RT724	£82·00
Sansui TU3900/TU5900/TU7900	P.O.A.
Yamaha CT410	P.O.A.
Yamaha CT610	P.O.A.
Yamaha CT800	P.O.A.
Yamaha CT7000	P.O.A.

TURNTABLES

ADC Accutrac 4000	£232·00
Garrard SP25 Mk 4 Wood Module with Shure M75-6 wired	£36·50
Garrard 125SB Wood Module with Shure M75-6 wired	£47·00
Garrard 86SB Mk II Wood Module with Shure M75-6 wired	£65·50
Garrard GT55P Module Shure 75-EDII	£99·50
Garrard DD75 Module Shure 75-EDII	£98·50
Harman Kardon	P.O.A.
Pioneer PL112D	£61·00
Pioneer PL115D	£69·50
Pioneer PL117D	£103·25
Pioneer PL510A	£123·25
Pioneer PL530	£181·75
Pioneer PL550	£193·00
Rotel RP1500	£62·50
Thorens TD160BC Mk II (less Arm)	£78·00
Thorens TD160C Mk II	£96·00
Thorens TD145 Mk II (Auto Lift)	£114·00
Thorens TD126BC Mk II	£175·00

CARTRIDGES

ADC Q30	£7·00
ADC Q32	£9·25
ADC Q36	£12·00
ADC VLM II in H/Shell	£20·00
ADC XLM II in H/Shell	£25·00
ADC Super XLM in H/Shell	£35·00
Shure M44-7	£8·00
Shure M55E	£9·75
Shure M75/B	£12·00
Shure M75/EJ2	£15·00
Shure M75/ED2	£16·00
Shure M95ED	£20·00
Shure V15/3	£39·50

STYLI

ADC RQ30	£5·85
ADC RQ32	£8·50
ADC RQ36	£9·75
ADC RVL	£12·00
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Goldring D120 (G850)	£3·00
Goldring D110 (G800)	£3·50
Shure N44/7	£5·75
Shure N55/E	£7·95
Shure N75/6	£6·75
Shure N75/B	£8·00
Shure N75EJ2	£9·75
Shure N75ED2	£12·50
Shure N93/E	£9·00
Shure N95ED	£16·50
Shure VN35E	£18·25

SPEAKERS Complete

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Celestion UL8	P.O.A.
Celestion UL10	P.O.A.
Celestion Ditton 11 (pair)	£53·00
Celestion Ditton 15 (pair)	£85·00
Celestion Ditton 25 (pair)	£179·00
Celestion Ditton 33 (pair)	£130·00
Celestion Ditton 44 (pair)	£155·00
Celestion Ditton 66 (pair)	£255·00
Goodmans RB18 (pair)	£47·75
Goodmans RB20 (pair)	£60·75
Goodmans RB35 (pair)	£87·25
Goodmans Achromat 100 (pr)	£73·00
Goodmans Achromat 250 (pr)	£107·50
Goodmans Achromat 400 (pr)	£143·00
IMF—all models	P.O.A.
Jordan-Watts Janet (pair)	£48·50
Jordan-Watts Juno (pair)	£66·50
Jordan-Watts GT (pair)	£83·50
Jordan-Watts TLS (pair)	£165·60
KEF Coda	All normally in stock. Prices on application.
KEF Cantor	
KEF Chorale	
KEF Cadenza	
KEF Corelli	
KEF Calinda	
KEF Cantata	
KEF Model 103	
KEF Model 104AB with stand	
KEF 104 Stands	
Jim Rogers JR149	P.O.A.
Rogers LS3/5A	P.O.A.
Rogers Export Monitor	P.O.A.
Tannoy Eaton (pair)	P.O.A.
Tannoy Devon (pair)	P.O.A.
Tannoy Cheviot (pair)	P.O.A.
Tannoy Berkeley (pair)	P.O.A.
Tannoy Arden (pair)	P.O.A.
Wharfedale Chevin XP (pr)	£28·00
Wharfedale Denton 2XP (pr)	£42·00
Wharfedale Linton 3XP (pr)	£59·50
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Jordan-Watts HF Unit	£7·00
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KEF KK3 Kit (pair)	£99·00
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KEF B110	£8·25
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KEF DN12 (T27/B110/B139)	£6·95
KEF DN13/5 (T27/B200)	£4·95
KEF DN13/7 (T27/B110)	£4·45
Tannoy 10" HPD (pair)	P.O.A.
Tannoy 12" HPD (pair)	P.O.A.
Tannoy 15" HPD (pair)	P.O.A.

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Aiwa AD1250 (Cass. Dolby)	P.O.A.
Aiwa AD1600 (Cass. Dolby)	P.O.A.
Aiwa AD1800 (Cass. Dolby)	P.O.A.
Aiwa AD6300 (Cass. Dolby)	P.O.A.
Aiwa AD6500 (Cass. Dolby)	P.O.A.
Akai 4000DS Mk II (Reel)	£119·00
Akai 4000DB Reel Dolby	£170·00
Akai CS34D Cass. Dolby	£94·75
Akai CS705D Cass. Dolby	£122·75
Akai CS707D Cass. Dolby	£148·00
Akai GXC39D Cass. Dolby	£136·50
Akai GXC310D Cass. Dolby	£139·75
Akai GXC710D Cass. Dolby	£177·50
Akai GXC75D Cass. Rev. Dol.	£157·50
Akai GXC325D Cass. Dolby	£212·75
Akai GXC740D Cass. Dolby	£256·00
Akai GXC760D Cass. Dolby	£314·00
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Nakamichi 250	P.O.A.
Nakamichi 350	P.O.A.
Nakamichi 550	P.O.A.
Nakamichi 600	P.O.A.
Nakamichi 700	P.O.A.
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Pioneer 7070 (Cass. Dolby)	£203·75
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Tandberg 9141X Reel	P.O.A.
Tandberg 10XD Reel Dolby	P.O.A.
Tandberg TCD310 Cass. Dolby	P.O.A.
Tandberg TCD330 Cass. Dolby	P.O.A.
Yamaha TC511 Cass. Dolby	P.O.A.
Yamaha TC800GL Cass. Dolby	P.O.A.

HEADPHONES

Koss PRO5LC	£33·75
Koss PRO4AA	£30·50
Koss HV1A	£24·00
Koss HV1LC	£26·60
Koss K6	£13·75
Koss K6LC	£17·50
Koss KO727	£15·90
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Pioneer SE305	£16·25
Pioneer SE300	£17·30
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Nakamichi 620	P.O.A.
N.A.D. 60/90	P.O.A.
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Rogers A75/II	P.O.A.
Rotel RA212	£50·00
Rotel RA312	£61·00
Rotel RA412	£74·75
Rotel RA612	£99·00
Rotel RA712	£91·50
Rotel RA812	£130·90
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Technics stocked	P.O.A.
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Trio KA3500	P.O.A.
Yamaha CA410	P.O.A.
Yamaha CA610	P.O.A.
Yamaha CA800/II	P.O.A.
Yamaha CA1000/III	P.O.A.

TUNERS (Carr. £2·75)

Armstrong 623	P.O.A.
Armstrong 624	P.O.A.
Lux T33	P.O.A.
Lux T88V	P.O.A.
Lux T110	P.O.A.
Rogers Ravensbrook	£47·75
Rogers T75/II	P.O.A.
Rotel RT224	£54·50
Rotel RT324	£69·75
Rotel RT624	£101·90
Sugden range	P.O.A.
Technics stocked	P.O.A.
Trio KT1300	P.O.A.
Trio KT5300	P.O.A.
Yamaha CT410	P.O.A.
Yamaha CT610	P.O.A.
Yamaha CT800	P.O.A.
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Leak 3200	£174·95
Leak 3400	£216·95
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Lux R1500	P.O.A.
Marantz	P.O.A.
N.A.D. 140/160	P.O.A.
Rogers Ravensbrook	P.O.A.
Rotel RX152/II	£84·75
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Trio KR3400	£125·00
Trio KR4400	£159·00
Trio KR2600	P.O.A.
Trio KR3600	P.O.A.
Yamaha CR200	P.O.A.
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Akai 4000DS/II	£118·50
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Revox 1122/4	P.O.A.
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Thorens TD145C/II	£116·00
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Thorens TD160C/II	£98·00
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Goldring G820SE	£15·00
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Tandberg 3500X	P.O.A.
Tandberg 9100X	P.O.A.
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Koss HV1A	P.O.A.
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Akai GXC325D	£211·50
Akai GXC740D	£254·50
Akai GXC760D	£312·00
JVC 1740B	P.O.A.
Nakamichi 550	P.O.A.
Nakamichi 600	P.O.A.
Nakamichi 700	P.O.A.
Nakamichi 1000	P.O.A.
Pioneer 2121	£133·50
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Technics stocked	P.O.A.
Trio KX620	P.O.A.
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Yamaha TC511S	P.O.A.

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B & W range	P.O.A.
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Celestion Ditton 15	P.O.A.
Celestion Ditton 33	P.O.A.
Celestion Ditton 44	P.O.A.
Celestion Ditton 66	P.O.A.
Celestion UL6	P.O.A.
Celestion UL8	P.O.A.
Celestion UL10	P.O.A.
Chartwell	P.O.A.
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IMF Compact II	P.O.A.
IMF Super Compact	P.O.A.
IMF ALS40/II	P.O.A.
IMF TLS80/II	P.O.A.
Jim Rogers JR149	P.O.A.
KEF Coda	P.O.A.
KEF Chorale	P.O.A.
KEF Corelli	P.O.A.
KEF Calinda	P.O.A.
KEF Cantata	P.O.A.
KEF 104/AB	P.O.A.
KEF 103	P.O.A.
Leak 2030	£90·00
Leak 3020	£94·95
Leak 3030	£124·95
Leak 3050	£172·95
Monitor Audio MA1/II	P.O.A.
Monitor Audio MA3/II	P.O.A.
Monitor Audio MA4	P.O.A.
Monitor Audio MA5/II	P.O.A.
Monitor Audio MA7	P.O.A.
Marantz	P.O.A.
Rogers LS3/5A	P.O.A.
Rogers Exp. Mon.	P.O.A.
Videotone Minimax II	P.O.A.
Videotone Saphir I	P.O.A.
Wharfedale Chevin XP	£28·00
Wharfedale Denton 2XP	£41·50
Wharfedale Linton 3XP	£59·00
Wharfedale Glendale 3XP	£81·00
Wharfedale Dovedale 3SP	£138·00
Yamaha NS500M	P.O.A.
Yamaha NS625	P.O.A.
Yamaha NS1000M	P.O.A.

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KEF B110	£8·85
KEF B200	£10·25
KEF B139	£21·60
KEF DN12	£7·35
KEF DN13-SP1015	£5·25

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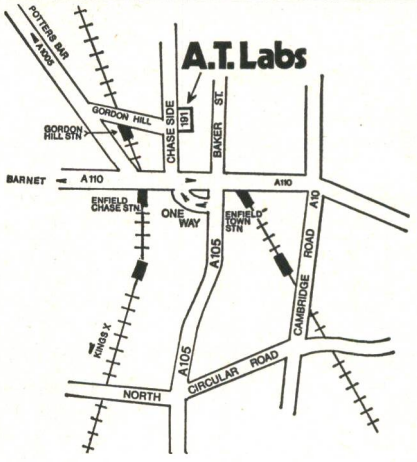
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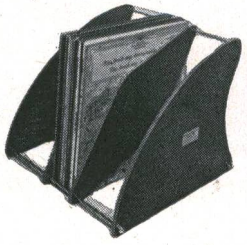
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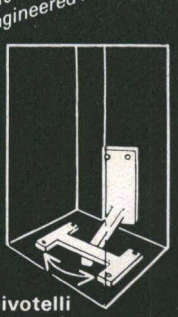
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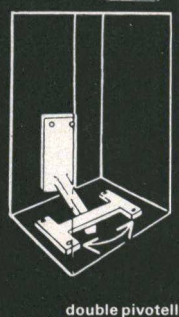
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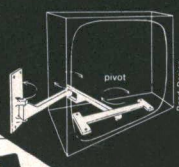
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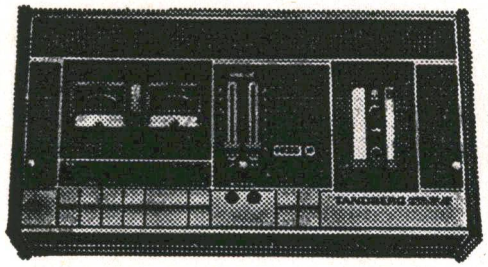
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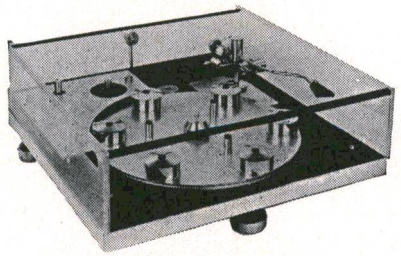
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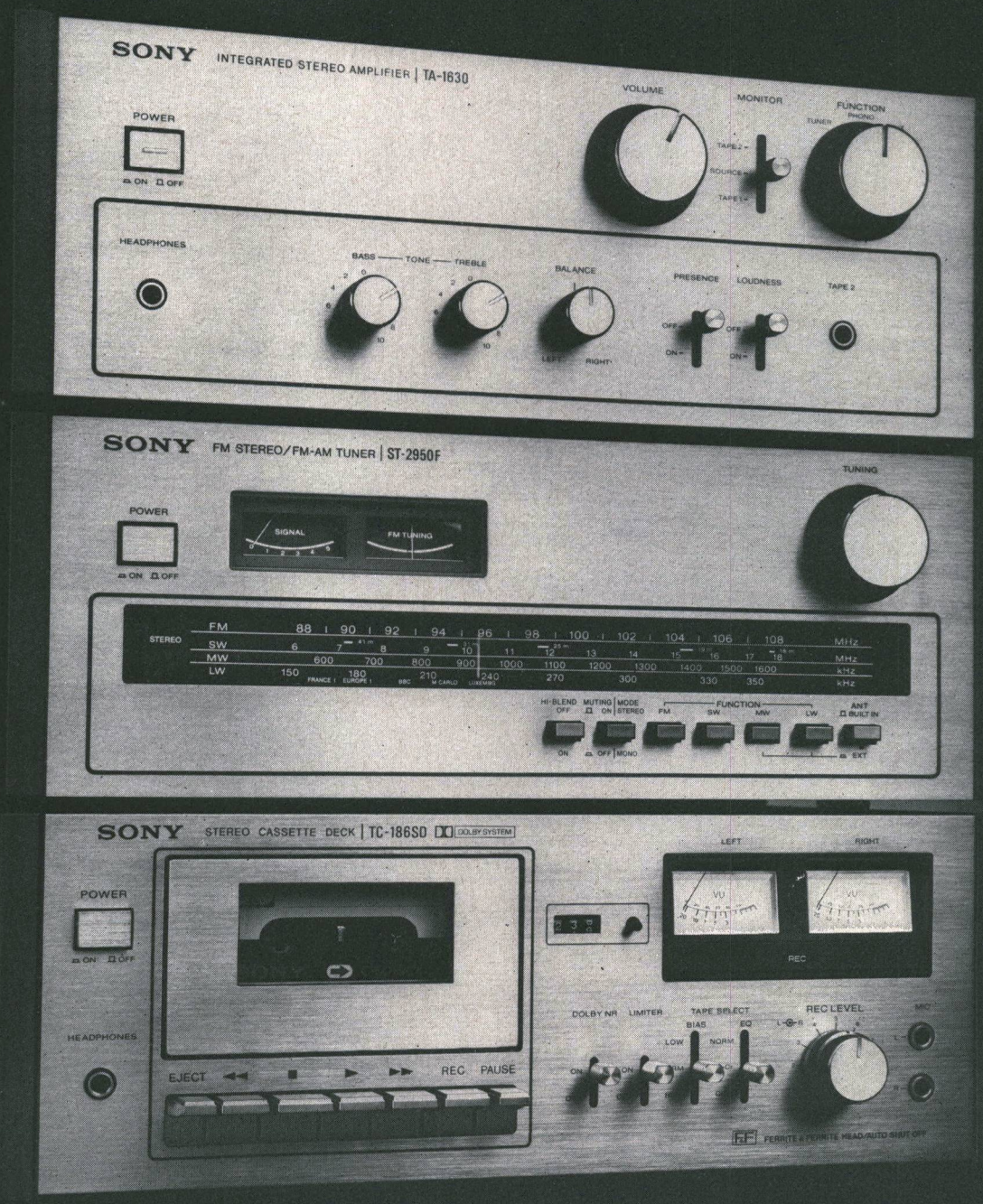
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STUDER REVOX

HFN 1.77

Why should your ea



rs have all the fun?

Has it ever occurred to you that this magazine is devoted entirely to giving your ears a good time?

That your eyes might feel a little left out?

That the usual hi-fi expert's collection of odd boxes, knobs, wires and switches can hardly be described as a visual feast?

It occurred to us some while ago.

And as you can see, our new amplifier, tuner and cassette deck go a long way towards redressing the balance.

Hi-fi that entertains your eyes.

These new items don't just match electronically.

They actually look as if they're meant to go together.

All three boxes are the same size, with the same finish and matching controls. We've even made the cassette deck a front-loader, so it doesn't have to be kept apart from the others.

This is no haphazard collection of knobs, switches and dials.

Nothing is just for show.

The things that make them look good, aren't there just for show.

Consider the cassette deck.

Those elegant words, "Dolby System",* mean you'll be listening to music, not hiss.

"Ferrite and Ferrite heads" means the heads last up to 200 times longer than ordinary ones.

One of those chunky switches is an equalisation control for all three kinds of tape. Another controls bias. Another cuts out distortion at unexpected peaks in recording level.

Broadcasting House, plonked in your sitting room.

One look at the long, elegant panel on the tuner will tell you it has four wavebands, not the usual two or three.

The two small dials tell you how strong your signal is, and let you tune very accurately.

The Hi-Blend button improves weak signals. The muting switch gets rid of interstation hissing.

While inside, lurk a seething mass of such electronic marvels as the FET front end, phase-locked-loop decoders and a uniphase filter.

This tuner practically lifts Broadcasting House into the sky and plonks it in your sitting room.

Do you love your neighbour?

If you love your neighbour, you'll both appreciate the "loudness" switch on the amplifier.

It means you can turn down the volume and still hear the extreme high and low notes.

Do you like the sound of other people's voices?

Then what you need is the "presence" switch. This boosts the middle frequencies to make speech stand out from background noise.

The amplifier also has click-stop bass and treble controls and facilities for two tape recorders.

Inside, a labyrinth of circuitry gives you 22 watts RMS per channel, elaborate protection circuits and direct coupled amplifier circuits.

Even your wallet will smile.

Two final points.

First, the names of our new pieces of equipment.

The amplifier is called Model TA 1630. The tuner is Model ST 2950F. The cassette deck is Model TC 186 SD. And they're just three of a new series of eight amplifiers, tuners and cassette decks.

Second, the price.

While this is anything but bargain-basement hi-fi, you'll find it costs quite a lot less than you'd expect.

We saw no reason to stop your wallet joining in the fun.

See the complete range of Sony Hi-Fi at your local Sony dealer or the Sony showroom, 134 Regent Street, London W1R 6DJ.

SONY®

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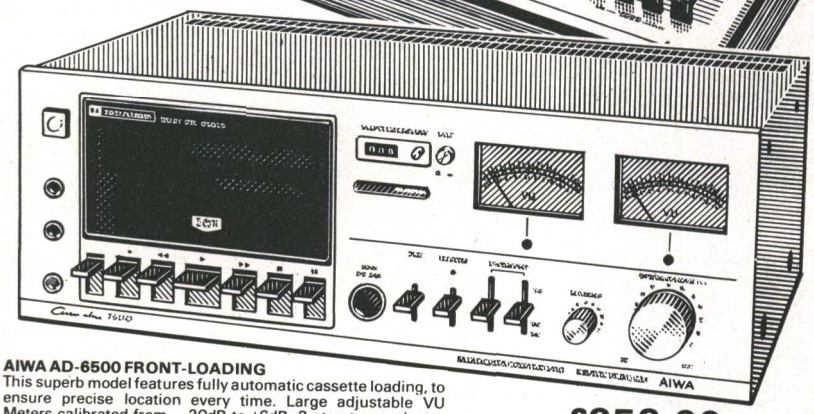
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AIWA AD-1300
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£96.94 DOWN
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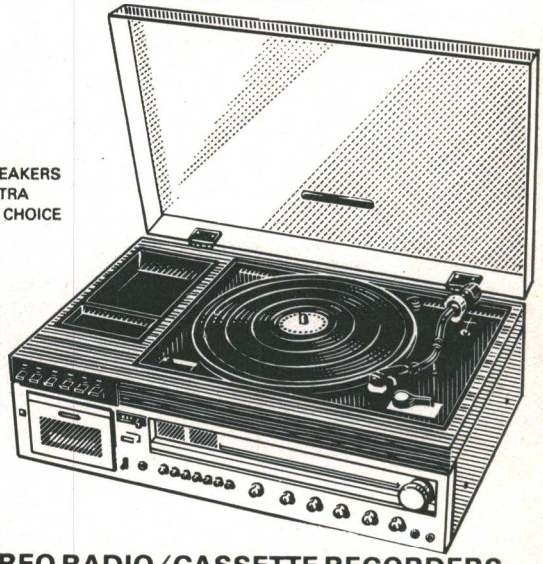
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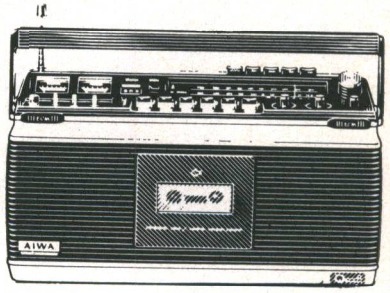
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£182.40
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AF-3060	£272.77	£92.77	18 of £10.00
RECEIVER			
AX-7500	£231.22	£77.32	18 of £8.55
CAR CASSETTE RADIO*			
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TRIO—ETC

UP TO

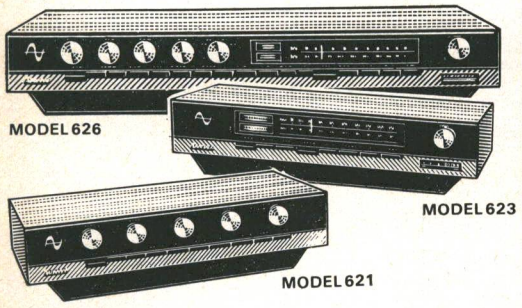
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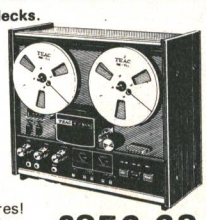


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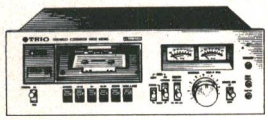
TEAC A-2300S
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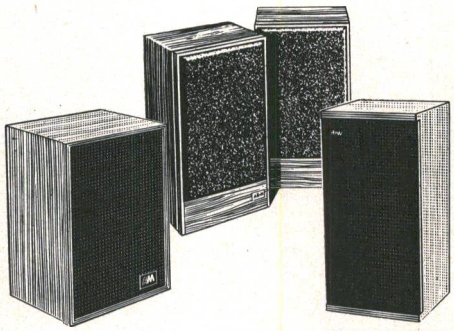


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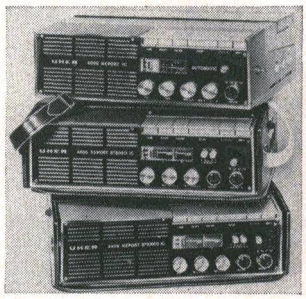
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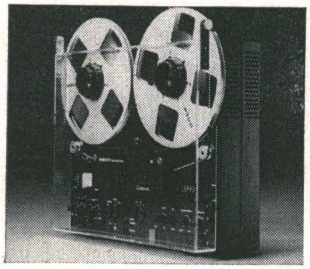
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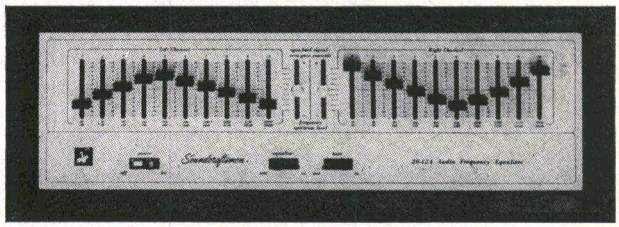
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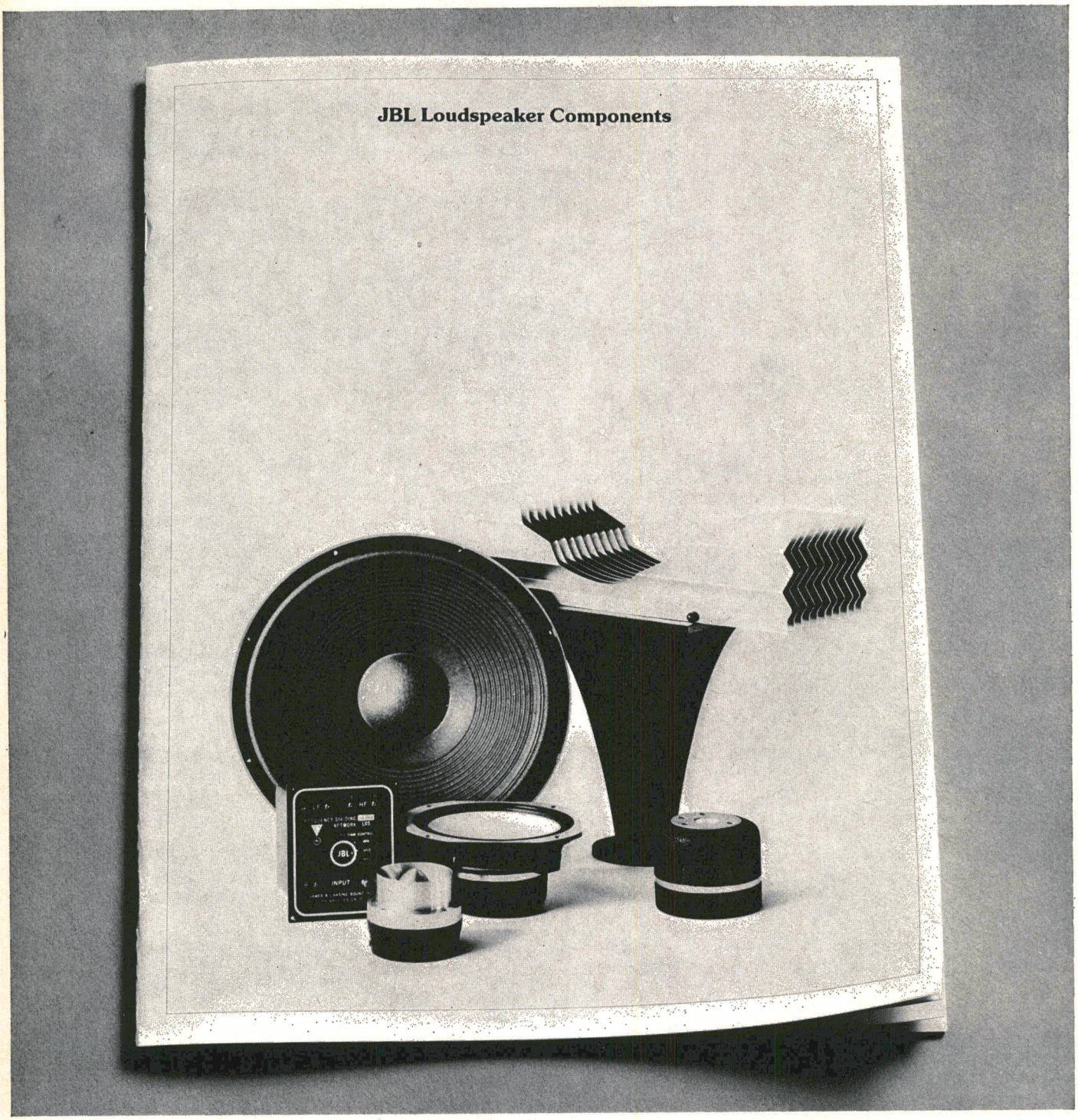
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MRS BEAN'S DIARY

Lots of new things to talk about this month. Some of them are available already, most will be available during October, and some regretfully we shall have to wait still longer for.

First the good news: the UHER 630 Tape Recorder looks like being the Audio "Find" of the year, not only because of its superb performance, its versatility, its amazingly good transport and its thoroughly professional design, but also because it is considerably less expensive (that means cheap) than its many rivals.

Second piece of good news: new turntables from Dual—the CS721, which actually outperforms its predecessor—and two new budget priced units. Even better news in this context is that we are now able to offer most types of complete cartridge pre-fitted to these units. Please specify when ordering.

Third piece of good news: at last we have some new receivers from Trio—the KR6600 looks like being awarded the title of the Official Receiver for this year.

Now the bad news! While at the moment most prices for most imported products are relatively stable and, for example by comparison with this time last year relatively cheap, we do not expect this situation to last, and have reason to believe that many imported items particularly those from Japan, are likely to cost substantially more by Christmas. If ever there was a time to buy, this is it.

The second piece of bad news is, of course, the hi-fi buyers perpetual nightmare—that of making a final choice. As always, we can be relied upon to assist in this matter, and will be pleased to demonstrate, to advise, to offer trial and generally to do what is necessary to help you to find the right item at the right price for you.

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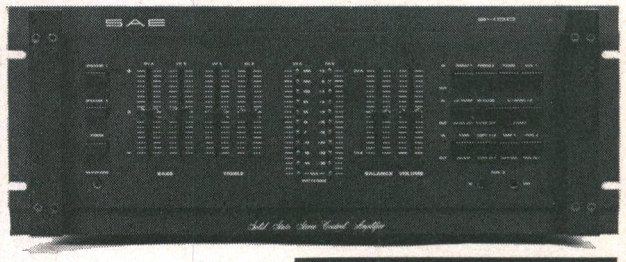
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FeCr	£14·70	£19·00	—
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Owners should contact their supplier immediately, where arrangements have been made for the return of their recorder and the replacement of this fuse (a simple matter taking just a few minutes) free of charge.

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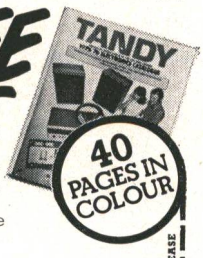
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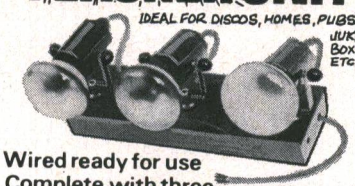
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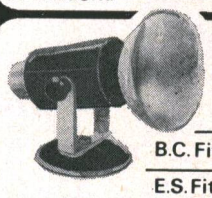
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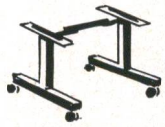
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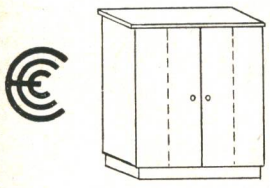
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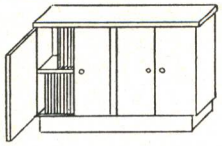
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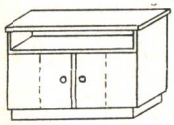


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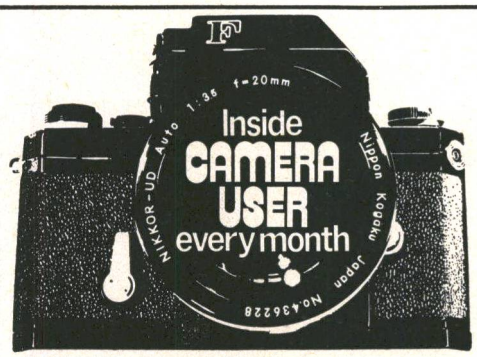


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Why is this record different from all other records?

Until now the only gramophone records you could buy suffered from a lack of dynamic range and restricted frequency response, and gave you almost as much surface noise, tape hiss, ticks and pops as they did good music. Now, for the first time, you can buy records which allow you to get the maximum performance from your high fidelity equipment.
Gale Maximum Fidelity Recording Limited is a new company specifically formed to bring together the world's great musical heritage and state-of-the-art recording techniques.
Gale Maximum Fidelity Recordings will be available only through component high fidelity dealers, so stop in and listen. You might be surprised just how good Bach and Beethoven can sound.

The first five albums are:
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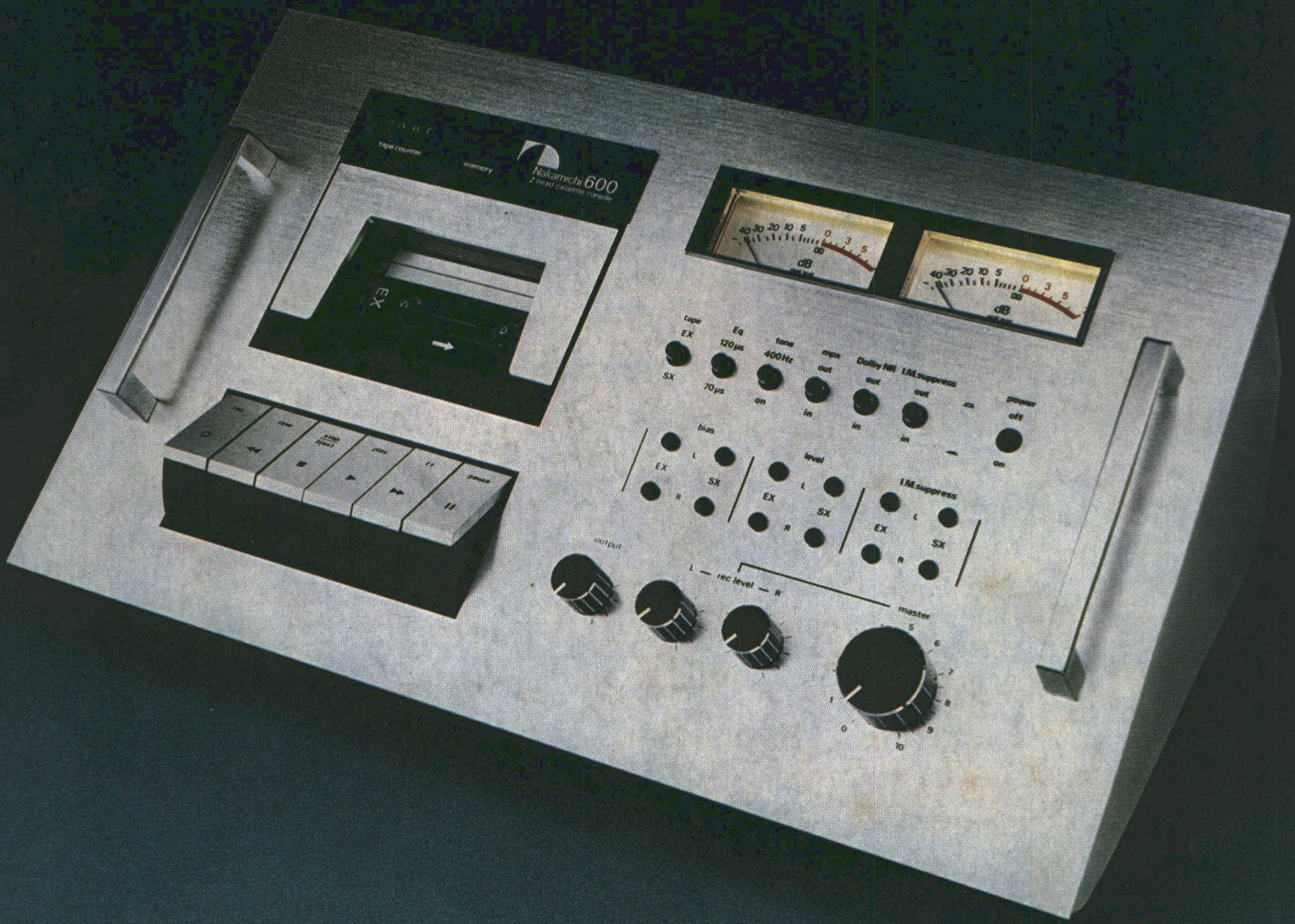
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Peter Frankl

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Suddenly, other 2-head cassette decks look like toys.



Take a look at the new Nakamichi DT600 above.

Such an astonishing cassette recorder, that it makes the competition look like no competition at all.

For a start, compare its dynamic range.

With the 600, you can record up to + 7dB without distortion. This is unprecedented by any other cassette deck, because no other model has the Intermodulation Distortion Suppressor that makes it possible.

Secondly, take the frequency response.

Other cassette deck makers may be proud of reaching 15,000Hz. Guaranteed minimum specification of the 600 is 40-18,000HZ ± 3dB. As for wow-and-flutter, at 0·08%, you can virtually forget it.

It doesn't stop there. Here is a combination of other features you won't find on any other 2-head deck.

Nakamichi's exclusive focused-gap crystal permalloy head.

Built-in test tone and record level calibration controls.

User adjustable bias.

Peak reading meters from − 40 to + 7dB.

A memory tape counter.

Master recording level control.

Even a system for unattended recording or playback.

We could go on.

Only Nakamichi could have made the DT600.

For the first time, 3-head performance in a 2-head machine.

NAKAMICHI

Natural Sound Systems Ltd, 10 Byron Road, Wealdstone, Harrow, Middlesex HA3 7TL. Telephone: 863 8622